

# Mapping emptiness: cartographic activations of empty space

Roger Pàez i Blanch

## Operative Cartography

We use the term operative cartography to refer to the production and use of maps to expand our conception of reality and promote its transformation. Maps have generally been used as documents that represent reality in an objective and allegedly neutral way. Maps do not just represent reality, however, they also construct it in a specific way. They activate a limited selection of parameters which allow for orienting a particular perspective on the world. This orientation of reality that is characteristic of maps opens up possibilities for the transformation of reality, which can be brought into play by architecture or other disciplines. Map and architectural design cross over in a complex and productive relationship: maps and mapping become tools that can have an enormous impact on architectural projects which, in turn, transform the milieu. In the context of the discipline of architecture, operative cartography implies the use of maps as a design mechanism.

This article will discuss the cartographic activation of empty space, in which emptiness is understood as an active parameter; empty space does not need to be filled in order to be treated as an object of knowledge.<sup>1</sup> Through a series of examples, we will look at some of the ways in which mapping practices can inform our understanding of empty space. Broadening our understanding of empty space through maps contributes to the expansion of methods, objectives and tools of architectural design, promoting operative relationships between map and project.

## From Abstract Space to Charged Space

Modern space, characterized paradigmatically by Kant's notion of a priori intuition, constitutes the framework for possible knowledge. According to the Transcendental Aesthetic, space is a condition of possibility for the existence of all external phenomena.

Space, in modernity, is characterized fundamentally as an abstract framework—it is a container without content. Heidegger refers to this modern conception of space, which begins with the Cartesian *res extensa*, as interiority or *insideness* (*Inwendigkeit*)<sup>2</sup>. Modern space is the result of a project of mathematization that tends toward an abstraction of the concrete qualities of space, including both physical-meteorological qualities and phenomenological-experiential qualities. On a philosophical level, modern space is characterized as an abstract container; on a day-to-day level it is characterized as an unoccupied area. Empty space is most commonly and familiarly understood as the area that is not occupied by solid objects.

However, during the first third of the 20th century, there is an important reaction in the art world, and in literature and philosophy, against this abstract conception of space—or, more precisely, against the instrumental, technocratic and mechanistic uses of the abstract conception of space which gained strength during the age of industrialization. Beginning with the experiences of the artistic avant-garde in the early 20th century, Modernism turns space into the central concept in architectural theory.<sup>3</sup> Space, as it is conceived of by the Modernists, moves away from its purely abstract condition to become charged on both a spiritual and perceptual level.

In 1974, Henri Lefebvre publishes *The Production of Space*.<sup>4</sup> The text presents a radical critique of both the conception of abstract space and of the idea of charged space posited by the Modernists. The critique is founded on the understanding of space as a social product. According to Lefebvre, *space cannot continue to be conceived of as passive and empty*; space is not a fact of nature or a fact of culture; it is a product of social

Traditionally, the term [space] only called to mind mathematics, (Euclidean) geometry and its theorems: it was seen as abstract, a container without content. [...] At best, space was considered an empty medium, a container that was indifferent to its content, defined according to certain unexpressed criteria: absolute, optic-geometrical, Euclidean-Cartesian-Newtonian. [...] [However, I do not consider] (social) space and (social) time as more or less modified facts of *nature*, or as simple facts of *culture*--but as products.<sup>6</sup>

What is interesting about Lefebvre's contribution in the context of this article is that it asserts that the general framework that we inhabit as human beings is a (social) product. With this assertion, Lefebvre redefines the role of practices, like mapping, that involve spatial codification. The way Lefebvre problematizes space through the demonstration of the theoretical unity between physical, mental and social space is closely related to the International Situationist's experiments that obstruct traditional social space and promote the free construction of lived space.<sup>7</sup>

Similar ideas are also explored, to a greater or lesser extent, in May of '68. *Beginning with the Situationists* experiments and with Lefebvre's theories on the production of space, cartography finds itself upheld as a political tool for the transformation of reality. From the moment that our physical, mental and social reality becomes denaturalized and becomes understood as a product, all kinds of new proposals for producing the real become possible. In this sense, mapping practices that incorporate a critical viewpoint contribute to the transformation of social space by producing an alternative imagery. This, in turn, promotes the implementation of new social practices and the construction of new realities. The notion of space as a product implies the possibility of producing space. As a result, the traditional notion of space as a neutral and predetermined framework is transformed: space becomes an oriented framework that can be constructed. The realm of the real is expanded.

## The activation of Empty Space in the Map

Lefebvre's contribution in particular, and the turmoil in May of '68 in general, lay the foundation for what will come to be called critical cartography in the 1980s.<sup>8</sup> In the beginning, critical cartography was focused on denouncing the technical, positivist conception of scientific cartography through a demonstration of the political character of all maps. The influential articles written by John Brian Harley from 1988 to 1991 focus, time and again, on what he called *the ultimate cartographic paradox: the map is not the territory yet it often precedes, and even becomes that territory*.<sup>9</sup> In one of those articles, Harley develops the notion of *silence on maps*.<sup>10</sup> According to the author, what a map does not include has an equal weight in the map's message as what the map actually describes. Sometimes the empty spaces on a map indicate a lack of knowledge, but they are also often the expression of particular worldviews.

The use of mapping practices to inform our understanding of (empty) space can involve at least two relevant options. A map can seek to populate the empty space with values that can be processed; or, it can activate that emptiness as such. In the first case, we are faced with mapping concrete aspects that will allow us to interpret that empty space as being full. According to the parameters that are used, different possibilities for transforming the milieu will emerge. In the second case, the challenge lies in activating emptiness itself so that it serves as the means for broadening our understanding of the world; there is no need for filling up the empty space in order to understand it. While it is obvious that the kinds of knowledge that can be generated by these two options are very different in nature, both options are relevant and worth researching.

\* Photographs are attached in the spanish version

As we suggested earlier, one basic idea that underlies operative cartography is the need to visualize the reality that is the object of intervention. In this case, because we are concerned with mapping emptiness, we have to explore the ways in which empty space is visualized. As such, the examples that follow are particular instances of activation of empty space in maps. They demonstrate different points of interest, which range from a reflection on the impossibility of mapping a specific object or condition to methods for visualizing the unknown. In this article we propose five interpretive categories for structuring the analysis of the use of emptiness in maps: the trivial map, the absurd map, the map of the unmappable, the paradoxical map, and the map of the unknown. These poles are not intended to establish a definitive taxonomy; they are meant to identify some of the ways in which maps are capable of taking on emptiness in a conscious way, as opposed to as a simple omission.

The trivial map activates a lack of content. It refers to the basic logic of conventional mapping, characterized as a regulatory mechanism which imposes the three characteristics of modern space according to Lefebvre: homogeneity, fragmentation and hierarchization<sup>11</sup>. The absurd map obstructs the dominant definition of space. It forces a meaninglessness that allows for the creation of floating signifiers that cannot be appropriated from a unique position of authority. The map of the unmappable activates empty spaces in the field of cartography itself, positing them as limits to be surpassed in the interest of adjusting the scope of what is mappable. The paradoxical map carries the operation of mapping to an absolute extreme. The lack of distance between map and territory cancels out the representational space implicit in the map's projection; however, that space is necessary in order for the map to function. Finally, the map of the unknown activates empty space by structuring it to receive knowledge. The mapping process orients the incorporation of future knowledge, although its particularities have yet to be determined.

## The Trivial Map

The trivial map is formally a map. It is, however, a useless map because it does not contain any information that is not self-referential. The trivial map reveals the limits of mapping in that it reduces its particular cartographic problem to zero. This reduction highlights the basic conditions of the map as a document and mapping as a technique of power-knowledge. Trivial maps work according to the logic of a trivial solution to any homogeneous system of linear equations, which is obtained by assigning a zero value to all of the variables. It is a correct solution, albeit a useless one. Some maps perform the same operation by eliminating the complexity of the object to be mapped so that the map simply becomes a tautology.

One famous example of a trivial map is the blank map that Lewis Carroll describes and illustrates in *The Hunting of the Snark*. Although it may seem paradoxical, it is actually one of the densest maps in history. Because it is almost entirely blank, it is an extremely eloquent illustration of the specificities of the map. Without any doubt, it is formally a map: it is a representation of reality that uses scale, framing, selection and coding.<sup>12</sup> However, in the context of Carroll's story, the map's meaning is at least double. On one hand, the crew see it as both a perfect map and a useless one because it eliminates all of the conventions that might complicate their discoveries during their journey through the unknown, as it is represented by the ocean; on the other hand, however, they also come to suspect that the map might be an indication of the captain's ineptness. The map implies that the captain is incapable of recognizing any signs that might be used for orientation to steer the ship across the sea in pursuit of the Snark.

Carroll's blank map is a brilliant demonstration of the problematic nature of all mapping. Terry Atkinson and Michael Baldwin's *Map of Itself* is a clear exercise in self-referential tautology. A tautological statement is necessarily true but it does not offer any information beyond the fact of its own truth. The *Map of Itself* does not reflect on anything except its own existence as a map; it is a frame of reference without any concrete content. The cultural context of Carroll's blank map is the English tradition of nonsense, an ironic alternative that worked as an escape valve against the rigidity of Victorian society in England and in European industrialized societies in general at the end of the 19th century. The self-referential gesture in the case of *Art and Language*, however, operates in the context of conceptual art.

## The Absurd Map

The absurd map employs a seemingly irrational mapping operation that borders on stupidity. The word absurd is derived from the Latin *sturdus*, meaning "deaf," which was associated with stupidity. However, here, the lack of rationality can be associated with an insubmission to conventions and dominant narratives. In that sense, the absurd is distinguished from the inane in that it always encodes a discourse that is critical of what society at large considers to be serious thought and serious behavior.

The *Map to not indicate...* is a partial representation of reality, whereas its title refers explicitly to that which it does not represent. This emphasizes what the map does not do. This absurd gesture highlights the fact that all maps are incomplete: since they only show certain aspects of reality, they fail to show all of the rest. The interplay between this graphic representation and the map's title demonstrates the inversion between what the map does—indicate Iowa and Kentucky—and what it says that it does—not indicate everything else that would be included within the limits of the map. The map's absurdity continues in the long list that makes up its complete title, which contains elements that are not derived from a unified classificatory logic. The list includes state names (political divisions) as well as the names of natural formations like lakes or bays. Even within the logic of political divisions, the list includes elements from different categories, like the case of Canada and Ontario (the latter being a part of the former). The inclusion of the *eastern borders of North Dakota* is particularly interesting because it constitutes a specific reference to the frame that limits what is (not) indicated on the map.

The map *A i B camina una altra UAB [A i B walks another UAB]*, documents an absurd action: the attempt at walking in a particular place while following a map that corresponds to a different place. The displacement, however, is not a spatial one, as in the case referred to by Guy Debord<sup>14</sup>, but a temporal one. Above all, the map demonstrates the friction generated between the built reality of a place and the mythical reality that is used as a guide for the action undertaken. The process involves using a GPS system to follow the coordinates that correspond to an unbuilt architectural project for the Autonomous University of Barcelona in order to walk through the exact geographic location where it would have been built. Because the site is occupied by the current UAB buildings, it is impossible to stay within the confines of the unbuilt project, a fact which highlights the friction between the current reality and the reality that never came to pass. This absurd gesture upholds the architectural project as an alternative reality and as an inhabitable place.

## A map of the Unmappable

Attempting to map the unmappable is a way of adjusting the boundaries of cartography, while exposing its current limits—although those limits are, nonetheless, always contingent and subject to change. There are

two tendencies that can lie at the root of this action: constructive and negative. An action that is undertaken from a constructive perspective seeks to legitimize a particular object, place or event that is significant to a specific worldview by situating it on a map. A negative perspective questions the validity or the pertinence of the operation of mapping itself applied to the object in question.

An example of the constructive perspective is the Hereford *Mappa Mundi*; its intention is to create an image of the world that is in keeping with Christian scripture. One of the ways it seeks to support Judeo-Christian cosmogony is by placing Paradise on the map of the known physical world. Paradise is located on the eastern edge of the world, on the line that connects Jerusalem (center of the world), Babylon, the Euphrates, the Tigris, the Indus and the Ganges delta. In spite of the fact that it is inaccessible—it represented as an island surrounded by a wall with a locked gate and a ring of fire, Paradise is placed in continuity with the cities, mountains and rivers of the known world. This mapping operation reinforces the objectivity of Paradise and the biblical myth gains ground as a dominant narrative. An example of the negative perspective is Mono Lake nonsite by Robert Smithson. Smithson makes the map disappear precisely at its focal point. The idea of a non-place, according to the author, is associated with a map that will take you somewhere, but when you get there you won't really know where you are. In a sense the non-site is the center of the system, and the site itself is the fringe or the edge.<sup>15</sup> The map creates a double movement: on the one hand it localizes, while on the other it erases. This isn't an absurd map or a trivial map; it is a map that obstructs itself. It designates a specific place as an unmappable object; at the same time, however, it does not deny the possibility of mapping that negative gesture. According to Marie-Ange Brayer, *the map is not an analog of the territory; it is an involution of the space of representation itself. This involutive twisting of the map is, of course, a way of destroying its representational space.*

## The Paradoxical Map

The paradoxical map on a scale of 1:1, which cancels out the space between map and territory, brings up more general problems related to the role of mapping as a system for representing reality. In fact, it marks a clear limit of the cartographic realm: the map is not reality itself.

Both Carroll's and Borges's maps point out the paradox of a map that coincides with reality. Beginning with the Mediterranean portulans in the XIV century, Western maps were developed, for the most part, as a system for describing physical space based on the linear correlation of distances on the map with respects to reality; they were based on scale as it is understood in the conventional sense. The obsession with representing reality with increasing accuracy translates into an attempt to bring the scale of the representation successively closer to the actual scale of the object being represented. The process, which culminates in the paradoxical map, has its roots in the modern Western vision that assumes the possibility of arriving at objective knowledge of the physical world. Paradoxical maps point out the impossibility of any unmediated understanding of the world. The map always begins with a projection and a selection of reality, and as such it constructs an oriented vision of what is knowable from a particular point of view. The map is not reality; but it constructs reality in a particular way.

## The Map of the Unknown

One final type of activation of emptiness in maps has to do with the concept of the unknown understood as what has yet to be known. This is exemplified in the idea of *terra incognita*. The map works as a matrix for constructing positions of meaning. In the same way that Mendeleev's periodic table of elements allowed for the

inclusion of elements that had yet to be discovered in 1869, these maps allocate a space for the unknown—which does not yet have a name or any defining characteristics—and postulate it as an object of understanding.

Laurent Fries's edition of Ptolemy's world map demonstrates this use of the map as a system for creating meaning. First, the unknown is labeled as *Terra Incognita* in a very evident way. The graphic importance of the label is equivalent to others that indicate major parts of the known world: *Ispanie Pars*, *Africe sive Ethiopie Pars* and *Oceanus Occidentalis*. Second, the system of coordinates makes a geographical allocation for what is not directly known at the time. Latitudes, the tropics and the equator are all represented; longitudes were understood but do not appear on this map. Other more complete editions, like the *Ptolemaei Typus Catalan Manhattan*, developed in the spring of 2000, is an ironic and slightly sinister example of a map of the unknown. A letter is mailed to all the inhabitants of Manhattan with the last name *Català* in all its variations (*Catalán*, *Catalan*, *Catalana*, *Catalane* o *Catalano*). The envelope contains a map showing the outline of the island of Manhattan, the perimeter of Central Park and 45 points marking the locations of the 45 *Catalans* in Manhattan. The point on the map that corresponds to the address where the letter is sent is marked with a hand-written note that reads, *you are here*. The recipient of the letter, who does not know why he or she is receiving it, finds a map marked with 45 points, one of which is his or her own house. The question most certainly arises as to what the other points represent and what they all might have in common. (Ruscello 1561) clearly show the network of latitudes and longitudes that organize the known world and the not-yet-known world alike.

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## Mapping emptiness

These examples, illustrating five different ways of mapping emptiness, use the activation of empty space to construct a critical attitude toward mapping processes and their uses. Given the need for overcoming the idea of space as a mere lack of occupation, there are at least two valid stances that can be taken from within operative cartography: on the one hand, the development of mapping parameters that can be used to fill that empty space and, on the other, an approach to mapping that presupposes the value of emptiness as such. Both approaches are not only valid, but necessary as they yield results of different kinds that are not reducible to one another.

The maps referred to in this article follow the second approach. They are examples, at times extreme, of the cartographic activation of emptiness and they reflect the different ways that emptiness can be treated as an active parameter in and of itself: empty space is activated as a value without (over)determining it, without needing to reduce it to quantifiable parameters. That empty space may result from a lack of specific information, from a failure to conceptualize a specific parameter, from the

voluntary obstruction of chains of meaning, or from a severe reduction of the mapping operation itself. In any case, the empty spaces that these maps activate do not have a literal correlation in the world. They are gaps in the (re)presentation of reality constructed by the map. Because of their narrative and conceptual charge, however, they can have a remarkable effect on practices that do in fact transform the world. The examples in this text should serve to demonstrate how certain maps construct reality in a particular, oriented way through the activation of empty space. As a result, the permanent dialogue between reality and representation is enhanced, thereby opening up new possibilities for transforming the real.

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MAPS  
OPERATIVE CARTOGRAPHY  
MAPPING EMPTINESS  
REPRESENTATION