Modernity could be explained through the process of subordination of space to time. The Cartesian division between res extensa and res cogitans already established the differentiation of two independent realms that would be associated to space and time respectively. Thus, the interior—identified with the subject who thinks—would gradually become “time”. In his Philosophy of Nature (2004), Hegel devotes a section to the category of space, defining it as “abstract objectivity”, in opposition to time, which is presented as the primitive, least developed appearance of nature that eventually becomes time through motion and thus is liberated from its “paralysis” and indifference (Brann 1999, 26). In this regard, space appears as pure exteriority, only measurable and graspable by means of (inner) reason, which is the only certainty the modern subject could trust.

Thus, it is not surprising to find that the approximation of Hegel to space is mainly geometrical, recovering some aspects already observed in ancient Greece, and of course by Descartes and Kant. Space is conceived as pure extension that finds its negation in the point, concrete and determinate (Hegel 2004, §256, 31). In fact, as Emmanuel Lizcano (2011, 31) notes, certain schools of thought had already posited geometry as a system “against space”, that is, as an instrument to control and measure it by determining delimited surfaces that could avoid a complete dissolution. This oppositional conception of space would have a remarkable influence in the theory and practice of architecture, understood as the discipline of the limitation and framing of spaces and graphically represented by sequences of fills and voids (poché) for many centuries. However, the extraordinary advance in sciences—especially from the sixteenth century on—heavily influenced the perspectives of spatial knowledge: the arrival of Europeans into the American continent and the process of “desacralization” started by Galileo (Foucault 1998, 176)1 initiated an extensive conception of space that would progressively become dominant in all fields. Formed space would be substituted by its counterpart, anti-space.

The influence of this new spatial perception would be adopted much later by architects. Once architecture enters the political discourse—roughly at the end of the eighteenth century, in the wake of the French Revolution—, space is no longer regarded as a passive, indifferent milieu, but starts to be conceived as an active element that can be—intentionally or subconsciously—transformed, arranged and manipulated not only to produce sensations and meanings, but also to embody the socio-political project of modernist architecture during the first decades of the twentieth century for an egalitarian, progressive society. Thus, anti-space becomes a privileged realm to apply the new principles of modern architecture. Nonetheless, this generalized vision would change during the last decades of the twentieth century, when the so-called “spatial turn” in social sciences and the crisis of modern urbanism transformed the conception of space and the ways of exploring it.

Peterson’s “Space and Anti-space” (1980)2 represents a seminal contribution to the issue of negativity in spatial terms. Influenced by Colin Rowe and his contextualist critique of Modernism, he

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1 The original lecture was given in 1967, at the Cercle d’études architecturales. It was entitled Des Espaces Autres.

2 An updated reissue of the article can be found on the author’s web site <petersonlittenberg.com>.
addresses the qualification of space in architecture and urbanism before and during the period of the Modern Movement. The modern project, following values of fluidity, openness and democracy, would liberate space from hierarchical constraints to give way to what Peterson calls “anti-space”, which is continuous, dynamic, flowing, uniform and unformed and, according to the author, may have “disastrous” effects, as it would lead to pure fragmentation and relativism under a promise of freedom and a new order. As matter and anti-matter, both conceptions are antithetical. However, Peterson proposes a way in which space and anti-space can be articulated by recovering the concept of negative space -the “void in-between” perceived spaces- in an almost dialectical manner.

Through this interview we explore the connections between space and negativity, as well as revisiting Peterson’s thesis in the 80s and discussing their force today, when architecture, as a decentered discipline, does not possess the primacy over space anymore, but produces it together with other disciplines and through diverse experiences. Besides, the text leads us to think about the social project of (modern) architecture, its current status and its eventual overcoming.

MLM The first paragraph of the article is illustrated with Abraham Bosse’s “Perspecteurs (1648),3 the perception of space as volume, integral with geometry and form”, although it is a tool that progressively lost its relevance and reliability and, as it is stated in the text, its decline coincides with a shift in the conception of space (and the appearance of anti-space). However, central European architecture theoreticians and art historians (Semper, Schmarsow, Auer…) would start recognizing space as the main object of architecture during the nineteenth century, much after it had been theoretically liberated of its identification with form and geometry (Copernican turn). Space began to be regarded as a dynamic object of study, not as a “dead” a priori or undialectical element, as Moravanzski (2003) says, in opposition to time. To what extent is it due to reasons that lie outside architecture as a discipline

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3 In the book Manière universelle de M. Desargues, pour pratiquer la perspective par petit-pied, comme le géométral, ensemble les places et proportions des fortes et foibles touches, teintes ou couleurs. (1648) <http://gallica.bnf.fr/ark:/12148/btvt1b8612037f1.image>
re-revolutionary discourse, romanticism, etc.? What are the exchanges/transfers that make possible a transition to an architecture interested about space?

**SKP** My own view is that space as a perceptual architectural element was invented by the Romans as a result of the plasticity of concrete vaulting and the consequent bending of the walls below domes. A positive volume of emptiness resulted and then this was explored though Roman ingenuity. See, for example, the small bath at Hadrian’s villa for a complex almost free style arrangement. The Romans also invented the first pictorial space of depth as witnessed in Pompeian wall paintings. All this before the geometrical ordering of perspective in Brunelleschi’s reinvention of it.

Prior to this neither architecture nor painting, as in pottery images or temples, was spatial. Greek temples do not create external or internal space. They guide and filter the flow of the surrounding natural visual forces as Scully pointed out in “The Earth the Temple and the Gods” which incidentally is a book about the space of nature and its tensions, perceptions and dynamics. So, in a way the background “radiation” of continuous space (which later became “anti-space” in my characterization of our attitude) was always there in some form of our understanding and perception. Space as figural entity is a man-made innovation. It is a medium of expression.

**MLM** Hegel, as Goethe, looked back at gothic architecture and praised its character of transcendence and freedom from functional purposes and rational constraints and relations (1975, 684; 1981, 120). Form is still relevant, but it is not tied to the concept of space (his description of the space of the gothic naves is dynamic, fluid, multiple… very similar to the notion of anti-space). This is associated, he argues, to the complexity of human interiority. Romanticism, according to your article, was one of the factors that motivated the rise of anti-space. Still, Hegel’s texts reflect an intermediate situation of transition between space and anti-space. Somehow, this moment is not reflected in the text. How could this transition be articulated? May the relational space of Leibniz shed light on the issue, as contrasted to the built-continuum of Hegel and the later appearance of anti-space?

**SKP** It is not a zero sum game. There is no transition from space to anti-space. They both exist conceptually and perceptively after the Roman period. One, the endless is bound to our ideas of the natural background, the other to a conscious deliberate act of willful manipulation. Unfortunately, it is this very attitude toward a history of progressive development that is problematic. This historicist process is a bias of thought that insists that the presence of the most contemporarily apparent phenomena is true and sequentially latest thing has to eliminate the “older.”

**MLM** The relation between space and anti-space emerges as an analogy of matter and anti-matter. Both realms are possible, although they cannot coexist (“Any coincident meeting of the two worlds will cause their mutual obliteration.”) Scientific knowledge has been an essential source to our perception of space: quantum mechanics, relativity, non-Euclidean geometry… enhance the dominance of anti-space as a continuum, extensive, infinite realm that pervades everything. This influence was very evident during the inter-war period and the rise of the artistic avant-gardes. How has this influence evolved until our days? Has anti-space “crystallized” to the point that it has become our natural conception of space?

**SKP** Perhaps we should use “Anti-Space” only as a term for an attitude rather than a description of the actual continuum space. It is an expression of a necessary duality to understand. If there is Space as closed form this is clarified by thinking of Space as also open ended formless. Of course, it is becoming “crystallized” as our culture’s “natural” image. That is the very danger I am writing to warn about. It is a great loss capacity and finally will be the end of place, if it is not recognized and resisted.

The ideas from the fields of knowledge you mentioned are false analogies for architectonic space, because man-made closed space is basically static. It does not correlate with or derive in any way from these theories, which are about motion, the interaction of dynamic forces, and acceleration. All this knowledge comes from realms that are outside of human tactile visual perception and can never be experienced. What does non-Euclidean geometry feel or look like? Just because something has been widely adopted or tolerated does not make it true or beneficial.
MLM Drawing techniques have been essential for architectural activity and, in this regard, the use of Beaux-Art’s poché used to be determinant in architectural compositions, in which “full” and “empty” space were separated. Obliterated during the first decades of the twentieth century, its interest was recovered by scholars such as Colin Rowe or Alan Colquhoun (Castellanos Gómez 2010, 171). Robert Venturi (1977) would use the term -distinguishing between open and closed poché-, giving it a more “spatial” meaning. How could this renewed interest be explained? Is this return to former tools also an attempt to return to an autonomous architecture?

SKP I like open and closed poché. I had never read that before. Of course poché was not a Beaux-Arts invention. It occurs naturally as a consequence of packing together a series of volumetric shapes. There will always be something left over. However, it was obliterated by modernist architecture precisely because that architecture wanted to be “autonomous” with the consequent destruction of the cities’ urban fabric. So, bringing the idea of closed space forward again is the opposite of a return to autonomous forms. It is about reintegration of solid and void co-dependency and it arises out of a fundamental dissatisfaction with modernist proscriptions against any closure or defined space. Post Modernism is much derided today but it did constitute a revolution.

MLM According to the article, space is perceived and anti-space, conceived. Coincidence or not, these are the terms that Lefebvre (1991) links to spatial practice and representations of space respectively. [Is there a connection? Conceived/perceived by whom? Is anti-space related to a controlled -invisible- plan and space to perceptions of everyday life?]

SKP I think it is simply that we can know that the universe is 15 billion light years in extent but we can’t perceive or believe it through experience. You know, it takes a real mental effort to look up at the sun as it rises in the morning and convince yourself to actually feel that the ground is not flat but is a rotating giant sphere moving at 2500 miles per hour while the sun is virtually still. It is not wrong. For all practical purposes the sun does rise and set. Conceptual and perceptual don’t really cancel each other out.

MLM The perception of space as an articulation of physical –architectural- elements has also been explored through the perspective of negativity. In fact, the Polish architect Oskar Hansen developed a pedagogical tool called “active negative” which consisted on modelling the perception of space through three-dimensional models. The idea was not to represent exactly the shape of an inner space (regarding architecture as a cast; that would be a “passive negative”, similar to Luigi Moretti’s models), but to study and record the subjective perception of space. Also Bruno Zevi reflected on representational tools of architectural space using positive/negative diagrams. These exercises reflect a deep interest in spatial questions. They are integrated within the theory of Open Form, which is also related to ideas of open space, dynamism, flows, subjective perception… that are linked to the definition of anti-space. There is a certain ambiguity in all these terms and socio-political contexts have definitely something to do with it, with associations such as openness-democracy; closeness-totalitarianism, etc. Are we still unable to describe and attribute qualities to space, or better said, is it impossible to reach a common language?

SKP Moretti’s models of architectural voids always fascinated me. Of course it is understood that the building fabric which define these “solid spaces” have been stripped away. It is a method of analysis to break out a part of something from its whole as a constituent part to better understand it. The act of isolating the space from the rest is itself a product of modern scientific method.

As to a kind of space corresponding to a political or social system, you are right this is the common perception of spatial contexts; “openness=democracy” and “Closeness=totalitarianism” or in more contemporary terms, you could also say “openness=freedom of individual” and “closeness= restriction on choice”. Of course, the opposite is true. This is the point of Space and Anti-Space, which was meant as an intellectual fable warning of this misconception.

Closed forms of space produce multiple places, which allow for more choice, more freedom, more diversity, and the possibility of change without destruction or revolution. The more diverse specific
figural spatial forms that are created and available, the more freedom there is to be different without interfering with others. This applies to both cities and architectural plans. In an open-ended spatial infinite flux where everyone expresses themselves there would be chaos and without boundaries there will be conflict. Boundaries are by –valent they both separate and join. In Robert Frost’s poem “Mending Wall” two men are fixing up their common country stone wall, one neighbor asks why do we still need this? The other neighbor replies with the proverb, because “fences make good neighbors”.

As to definitions of space types, first, I think the notion of “negativity” is not useful as a descriptive term and of course “anti-space” is not real in the sense of being descriptive either- it is a rhetorical devise that serves as a warning about its uncritical use. Let’s try a different approach suspending philosophy, science, and politics for a moment.

There are really just three conditions of space that we can experience as phenomena in our lives. The first is man-made; formed, closed, figural space (exterior piazzas or interior rooms and all the streets corridors and links that make sequences and patterns). The second is: the natural unformed, surrounding, background, - the open continuous space (includes parks, landscapes, oceans, and the sky that we look at and also fly through, the whole earth seen from the moon). The third is: that which is formed only as an ancillary to the design of figural space. It is the left over at the edges infilling between the elements of grouped composition. Let’s call it derivative space (this is habitable poché, the in between zone, left over area or what I used to call “negative space”). For example, let’s do a thought experiment. Imagine a group of different shaped coasters; ovals, squares, rectangles, octagons, etc. all pushed together to touch and interconnect. Together, they make a new assembled complex figure composed of figural space.

Then place this assembly on a tight fitting rectangular tray and observe the leftover surfaces of the tray. This left over space derives from both the edges of the assembled figure of coasters and the bounding edge of the tray. It is derivative space and cannot exist without the interchange between the created boundaries of figural space and a further outer boundary of enclosing form. Then take the tray out into an open back yard. Place it on the lawn in the surrounding world. The
tray is then sitting in the emptiness of continuous space.

If we added 10 trays and grouped them as a grid with space between each tray then these would form streets and we could make a little defined square so it was like a town of trays. All of it sitting in a continuous space background but made up of layers of figural space, blocks of trays and residual derivative spaces.

**MLM** The former works (Moretti's and Hansen’s) share some coincidences with Colin Rowe’s proposals around the figure-ground phenomenon. However, the political background behind them is absolutely different… For instance, Hansen was concerned about individual capacity and empowerment in a socialist country, whereas a few years later, North American groups –Texas Rangers, Five Architects, etc. - were interested in setting the basis for an architecture mainly based in questions of form, without ideological constraints. Do you see it reflected in the recent debate on criticality vs. post-criticality? –even if it is questionable that such a debate could be fruitful nowadays, in such restrictive terms.

**SKP** I don’t know about criticality… The majority of buildings going up around the world now, which are publicized, consist of towers. They are so various in shape, that there is no apparent idea of any analytical critical thinking among them. They are each just striving so hard to be spectacular and different, that no objective analytical comparisons are possible.

The negative space described in the article appears as a formal -volumetric- question, and this, somehow, renders it contemporary with current concerns of a certain sector of architectural theoreticians and practitioners. This apparently ‘residual’, hidden space that appears as a ‘byproduct’ (as Slavoj Zizek puts it,4 with the example of the spandrel) of the built environment has been regarded as a really powerful realm for architecture in projective terms. A space that remains hidden, unexpected, in-between or even taken for granted… This architecture “of walls” has also been explored by artists like Gregor Schneider (Haus UR). What may be the motivations to this turn to negative space? Is there a necessity of “useless” space, for unexpected actions? To what extent is this a reflection on the contradictions between inner and outer space and/or a critique of an “envelope” architecture?5

As I am thinking about this again, I believe that, these are good terms - “residual” “byproduct” space (just like the above “derivative space”). All these terms imply a dependency on first making plans for buildings as well as piazzas or streets in...
cities formed as figural space. There can be no theory or actuality of “residual space”. It does not exist by itself. It is a byproduct of something else.

MLM Because of their antithetical condition, coexistence of space and anti-space is not possible, and only gradable by means of negative space, according to the article. This idea somehow connects with Cacciari’s negative thought (1982; 2009) and the impossibility of resolution of crisis. Is it possible to work within this contradiction in spatial terms?

SKP Figural Space (Space) and Continuous Space (Anti-Space) can and do coexist in reality. There is no inherent problem formally unless you insist on an ethical or moral argument that Continuous Space is the only true space (like the only true religion). Then you are forced to argue that figural space is out of date, no longer new. It is wrong and even culturally dangerous. Anti-Space must scrub away all traces of the other in a kind of formalistic counter-reformation.

MLM Today we talk of an “informational” society; relations of production have changed again with the dissolution of certain physical constraints. However, with the outburst of contemporary design tools, formal concerns seem to come back again, although the “individual” control of the architect is somehow diluted, and distributed among many professionals. How is anti-space (and space) related to the virtual, in a moment when the network society has been assumed?

SKP Human beings still communicate through words and images whether these are face-to-face or digital. However, even with the cell phone, you are always somewhere when you use it. It is too early to tell how this will sort itself out. We still need places to be, so we need to make them as rich as possible.

MLM “The loss of space as an architectural medium is, in effect, the loss of meaning.” This assertion comes into conflict with Stanek’s (2012): “would it not be better to abandon the discourse on ‘space’ and restrict architectural discourse to ‘buildings’, ‘streets’, ‘squares’, ‘neighborhoods’, ‘parks’ and ‘landscapes’?” or “some of the most innovative contributions to architecture discourse and practice over the last 40 years were developed explicitly against the definition of ‘architecture as space:’ from Robert Venturi and Denise Scott-Brown arguing for ‘an architecture as sign rather than space’; to Rem Koolhaas’ confession to having ‘always thought the notion of ‘space’ [was] irrelevant’ despite his frequent use of the term.” How would it be possible today to talk of space as a constitutive, still relevant element in architecture? Besides, do you think that architects, today, should still go back to the notion of (formed) space, once they have lost their privilege over it? How to define the role of the architect today, amidst the crisis of the profession?

SKP Well certainly, it is obvious that Rem thinks of space as irrelevant. It shows and it is a major flaw in his project for Lille where there is no differentiated meaning among the parts but just a giant oval wrapper that makes it a giant object repulsing all of its surroundings. It is a basic premise of information theory that you need as many different forms (words, numbers, and differentiated shapes) as possible to represent and “carry” more and more complex ideas. Figural space is a carrier of meaning because it multi formed and not universally neutral (continuous space which is undifferentiated).

When Mr. Stanek uses “architecture as space” in your quote, I think he is actually referring to “Modern space” as a universal open-ended condition that could be revealed. Modernism was obsessed with space talk, but it wasn’t figural space that was meant. It was a striving for universal sameness. When Mies van der Rohe says about his own work “It is the will if the epoch translated into space” there are no rooms made. The architecture is about revealing the transparent universal continuum of a new order of uninterrupted flow.

Bob Venturi wanted to reincorporate ornament, symbolic elements and historical references into his work and eliminate the bland neutrality of Modern space. He is creeping up on making figural space in his buildings, even in his mother’s early fragmented plan there are subdivide areas and little bits of poché. I don’t think you can argue that he intended to substitute symbols for space. They are not mutually exclusive after all.

MLM About urban space, it seems logical to associate this “negative space” with the “voids” of the city, the space between buildings, public
space... In the article, the delimited space of streets and squares is contrasted with the open “anti-space”, “unsuitable to the city”, that could be associated to sprawl or certain modernist ensembles. “Anti-space promotes utopianism because it rejects the language of its antithesis.” If anti-space is egalitarian, homogeneous, random, formless, neutral... space is hierarchical, diverse, leading to movement, contradiction and conflict between groups; but both sides may appear in a same city, one next to the other. Could we find here the spatial encounter between the “volumetric, plastic” and “political” negatives, beyond the mere rhetorical analogy?

SKP I still do not understand your continued interpretation of “negative space” nor what you mean by “political” negatives. It surely does not apply to urban spaces like streets and squares. These are positive entities. There can be negative space in cities (in my definition) but it is mostly residual areas within the blocks, backyards irregular courts etc., but streets and squares are positive volumes of figural spaces shaped by the block surfaces, the void figures to the solid ground of the blocks. Urban space is not a leftover; it is the primary medium of urbanism.

So, again, urban space is not “negative space” (even in my apparently misunderstood definition, which I am quite happy to abandon for clarity of discourse, as I said, let’s call it Derivative Space).

Urban Space is the communal exterior figural space. There can be no urban in cities without networks of linked figural space. Space is the primary and essential medium of the urban condition.

The City is destroyed by the submission to and adherence to the idea that open continuous space should dominate because it represents the true spirit of the time or is like scientific mathematical space. It becomes Anti-Space (that is anti-spatial, by rejecting the use of figural space) it is a cultural attitude (as well as economic) that continuous space is given exclusive legitimacy. It is a corruption of thought that gives rise to this uncritical acceptance of Anti-Space.

MLM With regard to your participation in Les Halles competition in Paris, it is possible to detect some of your ideas on negative space in your team’s proposal: the reverse of the traditional wall town, “the inhabited wall”, the articulation of the urban poché, the critique to modernist space...

To what extent did this project have an influence on your Space and Anti-Space, especially on the development of the negative space concept? Besides, do you see an evolution of your ideas in your recent urban-scale project proposal for Manhattan Ground Zero? (It seems that the plan loses importance in favor of tridimensional space: the sunken garden, the articulation of different heights...) For the local newspapers, your proposal was the most “manhattanist” in the final shortlist. Why did they affirm this? We see on your project more gradual, livable spaces, human-scaled relationship with persons; so is this a kind of desire in the collective unconscious against the NY heights?

SKP You realize of course, that both projects, the Les Halles in Paris of 1978 and WTC Rebuild project of 2002 are designed around the same formal idea. They both use the same “parti” of an “inside” precinct hidden within the city. The inner precincts of public gardens are also approximately the same size.

So, to be honest, the formalized idea of a theory of space or for sure “negative space” had not even occurred to me when we did Les Halles. It was 5 years before I wrote the article. That doesn’t mean, of course, that I didn’t learn from the designing of it, but it was not conscious.

Then, Ground Zero- to participate in the design competition it was required to rebuild the exact 10 million Sq. ft. that had been lost and it had to be office space.

There was no choice but to build towers. The question became for us how to also incorporate traditional urban space on the ground in order to counteract or at least work with the destructive dynamic vertical aspect of towers. How can you have both city towers and urban texture? Your quote “collective unconscious against NY heights” is wishful thinking. I wish it had been the case but New York -the public-wanted “their skyline back” -literally in letters to the editor and public demonstrations- The Empire State building, the Chrysler Building, the Rockefeller Center complex- What else is there? The Statue of Liberty, but that is the image of NY.
These two plans represent opposite conceptions of architectural space and form. On the left, Borromini’s San Carlino interior is designed of multiple voids, each a different shaped volume, each a discrete independent room. It is made of Space itself wrapped by various solid surface boundaries. The whole complex is buried in a larger urban block; the outer façades while referencing the interior also define exterior Space, two separate streets and the diagonal corner fountain.

On the right, Le Corbusier’s Mill Owner’s Association building is designed of objects located within an empty unrestricted spatial continuum. The whole architecture is a square object composed of planes and screens floating on the open site. The interior is also a collection of objects floating within the walls on an open floor. No closed static volumetric voids are allowed in this conception.

No interruptions are made to the background void that everything sits in. It even flows into and through the object interiors, curving them into spirals and bending curves. It is, in this sense anti spatial unrestricted in order to achieve a free field of object dominance. It is the opposite of San Carlino. It is not the design of Space. It is the design of things within Anti-Space.

Although conceived in opposite spatial terms, these two plans are almost identical in every other organizational way. Curiously, they are virtually the same size. They have their main rooms in the same left half of a bisected overall plan. They have the same dynamic shaping of those main room walls, one oscillating, and the other spiraling. They have the same gathering space on the right half of the plan, the columned cloister in one, and the columned open “loft” hall in the other.

Image 4: (top) San Carlino alle Quattro Fontane, 1630. (bottom) Mill Owner’s Association building, 1953. (At approximately the same graphic scale). Source: Courtesy of Steven K. Peterson.
Modern space is placeless by comparison, and is the necessary enabler of an architectural desire for dominant objects.

It is too facile to say, that they are just different, one Baroque, the other Modern. Juxtaposed, they expose the consequences of an architecture made exclusively of either Space or Anti-Space.

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