ZERO PIRANESI

STÄDELSCHULE ARCHITECTURE CLASS

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EDITORIAL

Once in a while the history of architecture is opened like a treasure trove with a cornucopia of opportunities for our speculative indulgence. Sometimes these excursions into the recent or distant past serve to expand existing or introduce new ideas and paradigms. Sometimes history is revised or altogether re-written; sometimes these excursions fuel the discipline's productive momentum with conjectural theories and speculative design. This issue, guest edited by Peter Trummer, does the latter.

Based on his passionate explorations of architecture in relation to the city, Trummer turns to the 18th century architect and artist Giovanni Battista Piranesi. Piranesi is known for his etchings of Rome and imaginary prison scenes, and his work has been frequently the subject of analyses and ruminations about architecture and the city. Time and again Piranesi's work has stimulated the imagination of architects and artists as well as writers. So is also the case for Trummer. His fascination with Piranesi centres on the etchings of Campo Marzio in Rome and, specifically, the print with the plan. Or, more correctly stated, Trummer's interest is not only this specific plan by Piranesi but the entire and specific disciplinary history that has unfolded in its wake.

This history is vast, and on the modest number of pages that follow, only so much of it fits. Trummer has invited a few contributions that date some years back but that are seminal to the recent and contemporary discourse on architecture and the city. Other contributions to this issue are original. Echoing how Piranesi's work on Campo Marzio has been read and interpreted over time, the sum of contributions herein make up a minuscule, kaleidoscopic view on Piranesi's *Campo Marzio* and the opportunities it still might offer architecture today.

Trummer's theoretical musings and practical design speculations reflect this history in its own way. Assimilating a number of paradigmatic positions relative to Piranesi's *Campo Marzio*, including two presented in this issue, Trummer rigorously collapses select strains of other architects' readings of Piranesi's project to produce what he names a *Zero Piranesi*. The 'zero' in this, to quote Trummer, 'refers to a realist approach to architecture, which suggests that we will never know what the truth of a project is.' In turn, *Zero Piranesi* sets forth an architectural methodology based on a theory of replacement and aesthetic drift - that is, a loosening and exchange of aesthetic features between objects which also leads to the emergence of new sets of qualities. With it, Piranesi's plan of Rome is transformed into Trummer's *Object Plan* - a plan where multiple authors' various positions are absorbed. The *Object Plan* contains multifarious ideas which form a crust of architectural speculations accumulated from within.

Thus, practically speaking, Trummer's approach sets adrift readings, qualities and eventually propositions that belong

perhaps to Piranesi, perhaps to what his *Campo Marzio* has inspired. Regardless where they specifically belong, they make up the accrued and transformational history of the discipline anchored in Piranesi's project. To begin with, this was the rendering of Rome's history, but presumably a dubious and speculative version of that.

It is precisely this cornucopia of speculations based on Piranesi's *Campo Marzio* that Trummer revels in and this issue celebrates. The speculations are theoretical and practical and a tribute to architecture and architectural design as a discipline. Trummer's issue of the SAC Journal celebrates Piranesi's vision of ancient Rome and the disciplinary search and exploitation of the endless realities within his *Campo Marzio* plan.

As has become tradition, this fifth issue of the SAC Journal also includes a selection of the best projects produced recently by students in SAC's postgraduate master programme.

The six selected projects, three from 2017 and three from 2018, were the award winning projects of the annual AIV Master Thesis Prize, which is generously made possible by the association Architekten- und Ingenieur Verein - Frankfurt (AIV) and their members. Meanwhile, only the economy of publishing in this given format prohibits making public the many impressive projects nominated for the prize and that were not awarded.

However, the occasion to publish the award winning projects is important both in terms of documentation and dissemination of what is explored and produced within SAC's programme. The projects clearly reflect SAC's academic and disciplinary aspirations, but they also set out their own speculations on the trajectory of contemporary architecture and how we can imagine and design it.

The award winning projects are chosen by a small jury comprised of by members of AIV. Over the years, it has become clearly evident that their choices largely reflect how the End-of-Year jury panels have assessed the thesis projects at the close of the academic year. However, the AIV jury makes its decisions not knowing the outcome of the prior End-of-Year assessment. This fact serves as confirmation of architecture as a discipline beyond forms of subjectivity. In and of itself it should be celebrated as yet another affirmation of contemporary disciplinary concerns - this time concerning a consensus about qualities.

PETER TRUMMER

INTRODUCTION

Il Campo Marzio Dell' Antica Roma (1762) by Giovanni Battista Piranesi is a unique document to the discipline of architecture. Its importance in the discipline parallels that of Leonardo Da Vinci's *Mona Lisa* (1503) to the arts or, perhaps, Haydn's (1732-1809) sonatas to music. The centrepiece of Piranesi's *Campi Martiii* volume is the famous *Ichnographiam Campi Martii Antiquae Urbis* or plan-map of the Campus Marzio, the low-lying, ancient Roman district around which the Tiber River twists and turns. The first version of the *Ichnographia* dates to 1757. With its subsequent inclusion in Piranesi's book on Rome, it has become widely known and referred to in architecture.

Given Piranesi's careful measurements and documentation of Rome, his *Campo Marzio* has been understood, amongst other, as an archeological project, his contribution to the contemporaneous discourse on architecture, as much as a wild speculation on the condition and future of architecture and the city. The interpretations are too numerous and varied to fully account for. This, however, is merely a symptom for how the portfolio of etchings gradually has become so central to the discipline. Ideas and projects revolve around it like planets around the sun. With time, Piranesi's plan of Campo Marzio has become our law, testament, commandment, or oracle. It is also simply one of the most beautiful drawings we know. This plan by one of the greatest architects and artist of the 18th century has become the most known,

thought about, debated, researched and copied project in the discipline. Any architect who ever wanted to say something about architecture, has used Piranesi's plan as her or his inspiration or sparring partner - or just as an excuse to test own ideas.

Il Campo Marzio dell'antica Roma contained forty-eight plates. However, the plan drawing, *Ichnographiam Campi Martii Antiquae Urbis*, was never conventional plan. Piranesi's *Campo Marzio*, the short name for the drawing, is not a conventional archeological representation of Rome, nor is it a representation of Piranesi's contemporaneous Rome. It presents a city without streets or infrastructure, a city only of architecture. Buildings butt against buildings, architectural elements are strewn like densely grown wildflowers in a field, emergent spatial organisations overlap and penetrate one another. It may present an image of an imagined city; it may also be his defence of Roman architecture against Greek which some of his contemporaries advocated as a superior reference. The *Campo Marzio* may also be a critique of the political idea embedded within Giovanni Battista Nolli's map of Rome from 1748, the so-called *Nolli Map*, which divides the city into a space of architecture and a space of the urban. In Piranesi's *Campo Marzio* there is no distinction between the two, no distinction between architecture and the urban The space of the drawing has no ground and no infrastructure other than that echoing the blankness of the tablet on which the architectural figures were etched.

With *Campo Marzio* Piranesi's project emerges with capital "P" - an architectural "*Project*" that is in opposition to practice where the world external to the discipline and thus the client define architecture. With Piranesi the architect imagines and defines the world.

For this reason and since the Enlightenment, architects - generation after generation, over and over again - have announced their position, thesis or their own "Project" by drawing ideas, rules and formulas from Piranesi's *Campo Marzio*. Every idea that has been thrown onto it, has been simultaneously absorbed and rebuffed. It has generated a history made by architects through architecture. It has also <u>made</u> architects as much as architecture. Piranesi's plan emerges as a *Hyperobject* - what the philosopher Timothy Morton has described as 'objects that are so massively distributed in time and space as to transcend spatiotemporal specificity.' I imagine it like a black hole, something that contains all, from which we all emerge, and eventually all return to - except, this is not about the limits of astrophysics; it is architecture.

To reveal this so-to-speak universe within Piranesi's *Campo Marzio* and the history that it has generated, what follows is an attempt to stake out the "zero-ness" of this plan: the endless disciplinary search of the architecture that is embedded in and generated from it. However, any attempt at capturing an essence in the object of interest is bound to fail. *Campo Marzio*

eludes all attempts at access and being fully revealed. Yet, it is nevertheless a project.

The project, which this publication is a part of, also suggests a pedagogy. While celebrating the moment in architectural history that Piranesi's work and especially his *Campo Marzio* plan manifest, there emerges an interest in how architecture is rendered and cities are planned through a particular form of analytical drawing. That is not to say that there will be a singular mode of drawing - as some of the contributions herein testify to - yet there are modes of thinking and operating through drawing that surpass the more immediate consumption of images. It is also an unrepentant affirmation of the discipline of architecture. Hence, regardless of representational form, the pedagogy arises from the specifics of projects and - to borrow the idea of a project with capital "P" - from the discipline of "*Architecture*."

The issue that I have put together include two contributions that were exhibited at the Venice Architecture Biennale in 2012. These are respectively the seminal projects by Peter Eisenman and by Jeffrey Kipnis with Stephen Turk and José Oubrerie, exhibited as part of *The Piranesi Variations* that Eisenman curated in response to an invitation by David Chipperfield, the director of the Biennale with the overall theme of *Common Ground*. In fact, Eisenman delivered two projects for *The Piranesi Variations*, one conducted with students at Yale School of Architecture and one produced in his office. The former, *The Project of*

Campo Marzio, comprised of a large golden model of Campo Marzio which was developed on the basis of Piranesi's *Ichnographia*. The other project, *Field of Diagrams*, entailed Eisenman and colleagues imbuing Piranesi's *Campo Marzio* with an organisation produced by a set of diagrams. Specifically, a four-square diagram was divided into a subset of nine-square diagrams and deployed both horizontally and vertically onto Piranesi's drawing through series of transformational operations. The two projects led by Eisenman are presented herein in a common portfolio consisting of drawings and photographs of the models. Especially the *Field of Diagrams* is of interest here. Eisenman suggests that Piranesi's *Campo Marzio* does not have a diagram and that 'a proliferation of diagrams over the entire site at various scales' thus lends the space 'a potential organisation.'

Kipnis and colleagues worked with students at the Ohio State University to deliver *A Field of Dreams* for *The Piranesi Variations.* The project was subtitled *An Architectural Allegory* 'wherein,' as Kipnis puts it, 'the erotics, the passions, perversions, and spectacles of ancient Rome so perfectly frozen by Piranesi's etchings are reanimated as a morality play for contemporary architecture.' The playful and saturated design of the project explored on one hand the '"groundlessness" of contemporary global culture' based on Piranesi's destabilisation of the historic legacy and status of the ground in his *Campo Marzio*. On the other hand, the project staged a 'fictional tableau' with a select, speculative roster of architectural figures, players and characters. The latter was inspired by and made in recognition of John Hejduk's project *Victims* (1984). The players were in part designed with reference to Piranesi's architectural elements in the *Campo Marzio* plan, in part to recent and historical projects by other architects.

The presentation of *A Field of Dreams* herein does not do justice to the extended research for the project, nor its richness in detail and design intricacy. Moreover, the interests herein is principally in the figures, players and characters. The visual material is accompanied by Turk's introduction to the project and a shorter text by Kipnis that outlines his idea of how *ground* is transformed into *land*, then *datum*, before it becomes a series of *fields*, each stage historically produced through transformational political forces. All the material presented has been extracted from a booklet that more fully describes the impressive project. However, while the presentation herein is in no measure complete, the importance of the project becomes clear, both for its speculative take on Piranesi's work as well as its contemporary value - almost eight years after it was shown in Venice.

Examining Piranesi's *Campo Marzio* in graphic detail, Michael Young's essay lends a further argument for understanding the 18th century set of etchings as 'a speculation on architecture in relation to architecture' - that is, above all else as a disciplinary concern. In *The Paradigm of Piranesi's Campo Marzio Ichnographia*, Young examines how the work destabilises conventional phenomena and elements in ar-

chitectural representation. Through comparative analyses where he references, amongst other, the *Nolli Map* of Rome as well as latter-day projects by contemporary architects, Young assesses graphical poché and entourage, architectural elements' relation to the ground as much as to each other in Piranesi's vision of ancient Rome. Eventually he argues that Piranesi's *Campo Marzio* may be understood as 'a critical statement regarding architecture and the city' through which a paradigm shift opens and aligns itself with a parafictional reading of reality.

Another text contribution, *Parachronism*, is by Giacomo Pala. Based on what he argues is Piranesi's own speculative and conjectural use of history, Pala attempts to construct a new historical paradigm, a parachronistic use of the past. Pala's parachronism centres on how history, the way that we read the past, is always a construction in the present given the needs and ambitions of its authors. This cannot be reduced to relativism since it engages with the past. Pala uses Piranesi's *Campo Marzio* as well as Piranesi's work as a restorer and dealer of antiquities to build his case. History is not a firm and stable entity, and in relating to and using it, architecture emerges not merely concerned with the design of form and space but also the design of time.

Parsa Khalili's *Campus Martius East* provides a comparative case for Piranesi's treatment of Rome by analysing Rome's historical, alternate and eastern capital, Constantinople, and transferring features of Piranesi's *Campo Marzio* to this city. Khalili's project is documented in text and drawings and focuses on Constantinople's different, 'introverted definition of monumentality' and the concomitant urban fabric. The analysis goes through detailed historical differences between the cities, reflecting both political and cultural conditions. Thus, on one hand, the project sorts eastern and western traditions from one another. However, it also renders the formal differences in architectural and urban terms between two historically and geographically close locations. Eventually, Khalili argues, his project is 'projective' and revolves around the development of representational techniques appropriate to its location. In this manner it makes a case for contemporary practice beyond the textual discursive.

Lastly, Marikka Trotter presents her *Flat, Heterogenous, and Lively: Piranesi's Diverse Maniere D'Adornare I Cammini*. The "site" of her analysis is explained by the direct translation of the title of Piranesi's publication, *Diverse Manners of Ornamenting Chimneys*, a book from which Trotter addresses three plates with renditions of respective etchings by the artist. At first, we might think we are far removed from Piranesi's vision of ancient Rome. However, as Trotter examines the plates with scrutinising attention to detail, it gradually becomes clear that how Piranesi addressed architectural interiors and ornamentation is closely related to how he presented his vision of Rome. Trotter comes away from her attentive analysis and description with an affirmative take on our contemporary con-

dition; she celebrates the saturated and vibrant multiplicity of objects and realities to which we belong. Trotter describes this in terms of 'heterogeneity' and 'flat ontology,' two terms that apply equally well to Piranesi's advice on interior decoration as to his renderings of ancient Rome. They also apply to our present-day culture and frame theoretical and conceptual currents within the discipline.

This issue attempts to report from these worlds of multiplicity. What is at stake is the collapse of objects and forms without undoing but celebrating their differences. Histories and "grounds" against which things are read are destabilised. Yet, it is nevertheless possible to inhabit these worlds by impregnating them with an organisation through reading and drawing. Piranesi offers a ground zero for this endeavour. In particular his *Campo Marzio* is a case in point of what it means to erase, assimilate and construct at one and the same time. The locus of Piranesi's *Campo Marzio* is twofold. First it is Rome and this city's particular history. With his *Campo Marzio* it opens up to novelty. The many readings of his project attest to this. However and second, the interiority thus constructed is returned to architecture and becomes an attractor for all kinds of speculations. In other words, there in no longer such thing as Piranesi's *Campo Marzio*, there is only an increasing aggregation of readings, decodings and speculations that tangentially relate to what Piranesi may have intended. This is what I have termed *Zero Architecture* and here, specifically, *Zero Piranesi.*

I make two attempts at approaching and defining this herein. One is in the form of the essay called *Zero Architecture*. With it I propose a neo-realist approach to the contemporary city. The second is the concluding essay, *Zero Piranesi*, which also reports on the ongoing research project with the same name. Here I present an architectural pedagogy comprising of exchanging aesthetic qualities of plans with qualities of other objects. To this end, I frivolously make use of all kind of plans emanating from Piranesi's *Campo Marzio*, including the two projects presented after this introduction. With such an appropriation I produce what I call an *Object Plan* believing - as it were - that I do so in the spirit of Piranesi. However, as they say and what the history of Piranesi's *Campo Marzio* suggests, only time will tell.
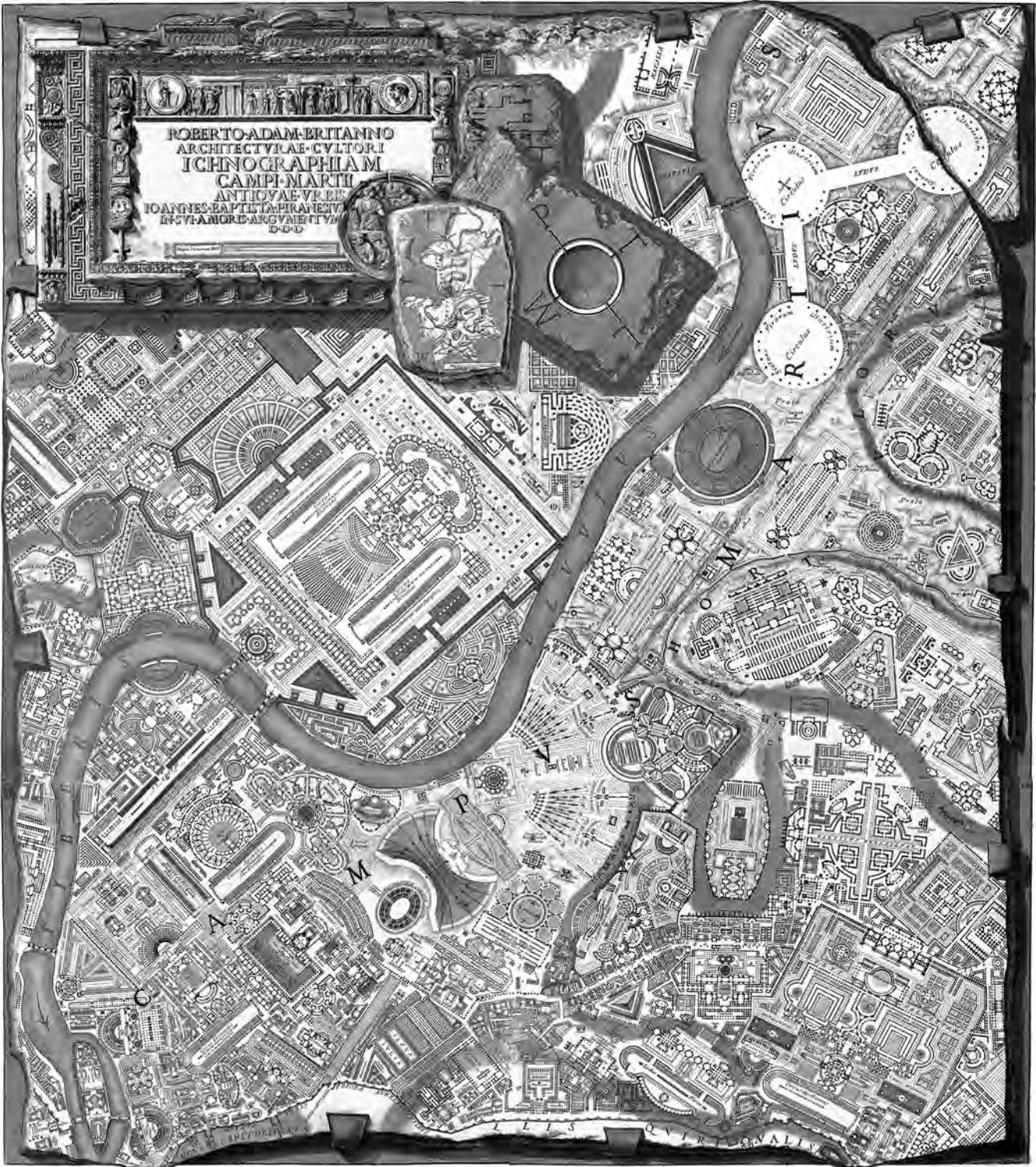
Giovanni Battista Piranesi, *Campo Marzio* (1762)
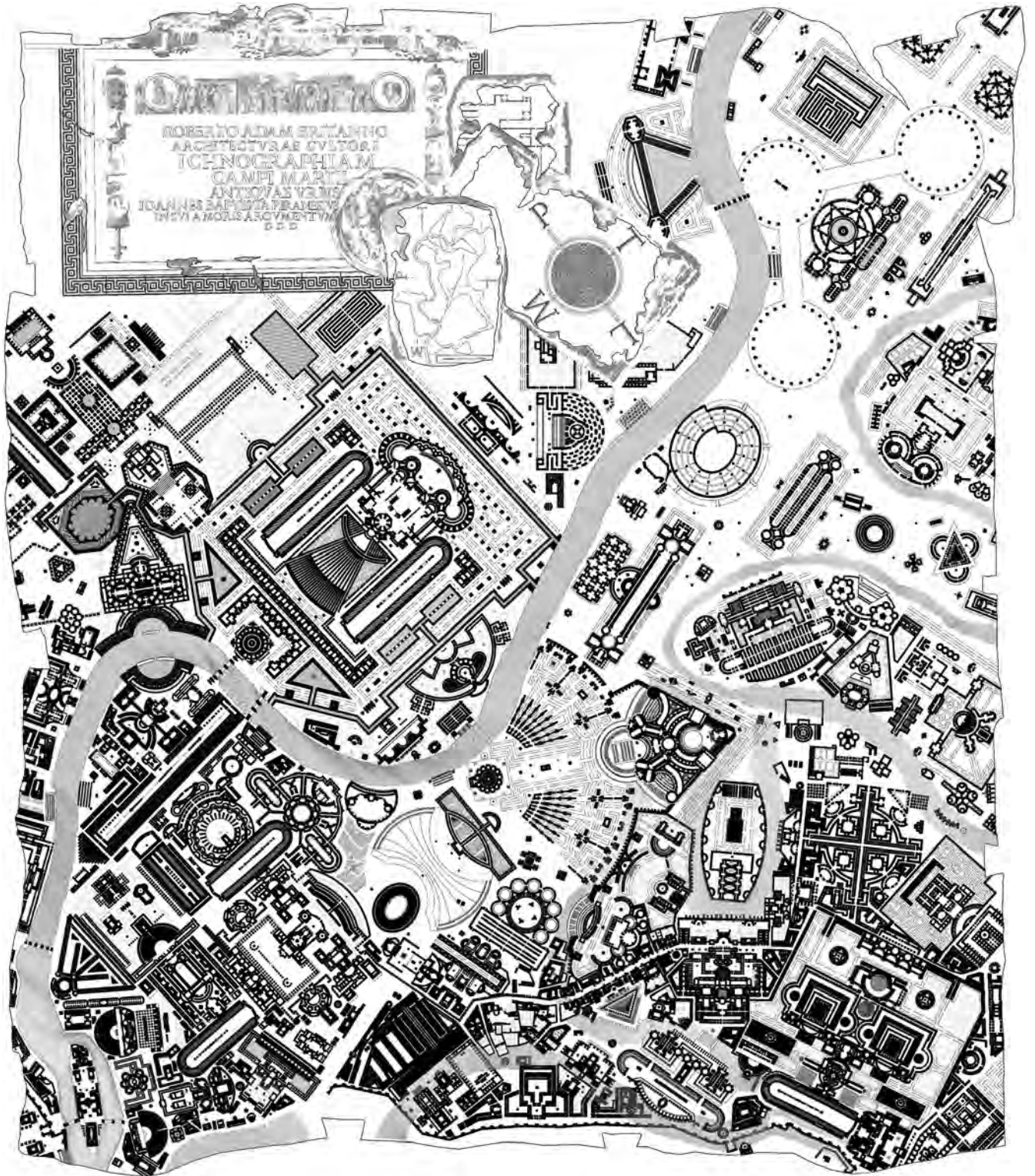
Peter Trummer, re-drawn version of Piranesi's *Campo Marzio* plan

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PETER TRUMMER

ZERO ARCHITECTURE
A NEO-REALIST APPROACH TO THE ARCHITECTURE OF THE CITY

The city is the largest human artefact we know. The city remains man's greatest work of art.[1] The city can be seen as the last stage of Gilbert Simondon's fourfold process of the individuation of the world: "the physical," "the biological," "the psychic" and "the collective."[2] First our planet emerged as a *physical* entity within our solar system. On top of the physical world arose the *biological* world with its fauna and flora. Out of the biological world emerged the *psychic* world with the emergence of the human species. The last stage of the fourfold process of individuation is the emergence of *collectives*, or, as Manuel De Landa calls it, *assemblages*[3] of populations of people, networks, and organisations which give rise to infrastructures of buildings, streets, and various conduits for the circulation of matter - namely, our cities.

THE CITY AS A HYPEROBJECT
The city is not only made by humans, it also made us. Aristotle says so in his well-known passage on Greek civilisation's invention of the city-state: 'Hence it is evident that the state is a creation of nature, and that man is by nature a political animal. And he who by nature and not by mere accident is

without a state, is either a bad man or above humanity; he is like the "tribeless, lawless, heartless one."'[4] With the city, man turns from a natural animal into a political one. The city was our birthplace as political subjects, a place of 'bios politikos,' or as Hannah Arendt calls it, 'vita activa,'[5] a life devoted to public-political matters. The city also invented human objects such as *language, law, politics, culture, capitalism, double entry bookkeeping, tragedy, drama, gambling, banking, planning, real estate, property, geometry, bureaucracy, processions, tax, credit, toll, armies, newspapers, traffic, manners, vulgarism, syphilis, ghettos, sanitation, pimping, pickpocketing, printing, copying, standardisation, privacy, grids, psychology, education, childcare, healthcare, monopolies, cooperations, mobs, guilds, institutions, modes of production, police, magistrates, administration, prostitution, revolutions, proletariats, slums, social division of labour, the burgher, the merchant, the craftsman, the robber, the spectator, the shopkeeper, the worker, the employee, the beggar, the flâneur, the thief,* and endlessly more.

However, the more we know about the city, the more the city withdraws from our understanding of it. The more we study and attempt to understand it, the more we know we will

not fully comprehend it. The opposite is actually the case. Ever since we scientifically tried to study our cities, the stranger they have become. The city has turned into what Timothy Morten calls a 'hyperobject.'[6]

But the city is a hyperobject not only to humans. It is a hyperobject to non-human things as well. As a physical entity, the city is made not only out of buildings, buildings are made by the city. The city is the birthplace of many forms of architecture: *the theatre, the temple, the courthouse, the academy, the gymnasium, the bank, the hotel, the insulae, the defence wall, the museum, the dome and spire, the hospital, the bathhouse, the storage, the prison, the mad house and clinic, the palace, the exchequer, the casino, the school, the guild hall, the town hall, the cathedral, the asylum, the orphanage, the university, the play house, the shopping mall, the fortress, the camp, the warehouses, the concert hall, the ballroom, the gym, the stock exchange, the library, the archive, the waste plant, the railway station, the sport stadium, the parking garage, the barrack, the arsenal and magazine, the dock, the harbour, the airport, the villa, the skyscraper, the data centre, the market, the graveyard, the street, the alley, the boulevard, the piazza, the square, the hinterland, the passage, the theme park, the public green, the park, the pleasure garden, the zoological garden, the bowling ground, the football field, the apartment, the office space, the drawing room, the salon, the corridor, the private toilet, the storage box, the dormitory and the fountain.*

Architecture lies literally and conceptually between us, humans, and the city. Architecture cuts out a space from this world and divides an inside from an outside. Architecture creates a new world as an interior enclosed by architectural elements: the wall, the roof, the floor, the window, the door. In our anthropocentric era we have tried to read the architecture of the city from the human viewpoint: either from the individual inhabitant or the architect, or from concrete abstractions given through the polis, the collective or society at large. The intention of this article is to look at the architecture of the city not from the viewpoint of a human subject but from that of a non-human object, namely, the formal properties of the city itself.

THE ORIGINATION OF ARCHITECTURE

When the city came into existence in the third and second millennium BC in Mesopotamia, it was characterised by

a wall which divided the world into an inside and an outside. The boundary between the city and the countryside not only divided the world in two parts, but more importantly produced a kind of knowledge, one which did not exist before, namely *architecture*. In his book on the European City, Leonardo Benevolo writes: 'The City is an enclosure, or a series of enclosures, in which the art of manipulating medium and short distances - that which from then on would be described as "architecture" - reached maturity, while the older art, which aimed at the occupation and modification of the unlimited landscape, was gradually forgotten.'[7] Benevolo argues that with the birth of the city, this new knowledge, called *architecture*, was given to the new space created within the city walls, while the older knowledge of the territory, the space outside the city walls, slowly disappeared.

Benevolo continues and claims that the city, with its enclosing walls and the space between them, acts as the formal originator of architecture. He states that within the city, each house, each palace, and each temple present enclosures in themselves and become important due to their degree of segregation from each other.[8] What Benevolo seems to argue is that the formal idea of buildings emerges from neither an architect nor society at large, but from the formal properties of another object, namely the formal properties of the city.

Let us visualise what Benevolo suggests. Imagine we take the framed space between the walls of the city, "the void," and move it into the city wall, "the mass." What results when we fuse the void space of the city with the mass of the city wall is a new form called "building:" a hollow space surrounded by a massive envelope. Without adding any other element, the two architectural entities, each with their respective formal properties, melt together and form a new architectural object with entirely new qualities. The fusion of the two entities of the city, a massive wall and a volumetric space between the walls, produces at the same time new material, formal, functional, and content-related qualities that previously were absent in the original two objects that define the formal qualities of the city.

Material: The material of the city wall is not anymore a continuous massive wall. It turns into a floor, a ceiling, a window, a door. The air of the city is no longer an extension of our troposphere but rather a controlled environment.

Form: The continuous, torus-like form of the wall turns into a figurative, aggregated volume, and the framed exterior space of the city becomes a new interiority, a fully enclosed space.

Function: The function of the city defined by its public spaces and their circulation turns into controlled, capsular spaces for various, differentiated programmes and events.

Content: The content of the city as the location of the polis, a place of collective properties, mutates into the place

of the "oikos," the place of the family household, the private property with its hierarchical organisation.

Such a fusion of the aesthetic properties of the city's architectural elements is the originator of the house, the palace, and the temple, and perhaps even of all 'prime buildings,' as George Kubler would call them.[9] We have always looked to architecture from either an outward-oriented viewpoint or an inward-oriented one - or, as Graham Harman would say, we looked either for what objects are made of or what they can do. We have hardly looked from the viewpoint of a building itself toward other buildings. I would like to orient my viewpoint to the formal and material properties of buildings and cities themselves, to imagine their appearance in the world. My hypothesis is that such an object-oriented viewpoint toward architecture might lead us to a new understanding and a new pedagogy of architecture in the age of the hyperobject. This is what I call "Zero Architecture."

So, what have been our outward- and inward-oriented views on the architecture of the city up to now?

MATERIALISM, FORMALISM AND MECHANOLOGY: MATERIALISM IN ARCHITECTURE

In principle we distinguish between two kinds of materialism in architecture. Inward-oriented materialism reduces buildings to their smallest components while outward-oriented materialism defines a building as a product of concrete abstractions, or as I prefer to call them, material regimes.

One perhaps remembers the essay *Landscapes of Change* by Sanford Kwinter.[10] Kwinter describes the futurist artist Umberto Boccioni's series of painting, *Stati d'animo: States of Mind I: The Farewells*; *States of Mind II: Those Who Go*; *States of Mind III: Those Who Stay*. Kwinter argues that in these paintings we find not just a representation of three scenes at a railway station, but in fact 'three evental complexes, "three morphogenetic fields," each arising within the same complex system of real matter and forces.'[11] Each painting is defined by a different stage of a molecular structure within thermodynamic processes of matter. The farewell scene expresses the turbulence and molecular aggregation of gases, the departing scene expresses the bifurcation and flows of liquids, and the scene of staying can be seen as the visualisation of the inertia and laminarity of solids. With this Kwinter introduced to architecture the idea that all kinds of forms unfold by event-generating processes in which the smallest molecular parts become reorganised in a manner illustrated by the image of an epigenetic landscape. The effect of this essay was that architects suddenly tried to understand buildings as the outcome of the generative processes of matter. Still today, every architectural school has more than one disciplinary discourse on such a materialist reading of architecture: simulating material behaviours in rigid-body software, aggregation thinking, particle simulations, or self-organising

form-finding processes within physical simulation engines. However, what all these techniques have in common is that they understand architecture as based on the agglomeration of smaller parts, like molecules and atoms.

The second form of materialism I refer to here, is when buildings are understood as the outcome of socioeconomic material regimes which are much larger than the buildings themselves. It recalls the famous expression by Hegel in his *Lectures on Aesthetics*, that architecture is the expression of the culture of a nation.[12]

The concept that submits architecture as the outcome of larger material processes is called "concrete abstraction." Many thinkers, like Hegel, Marx and Lefebvre, have defined the meaning of this term, but to me the clearest application of what concrete abstraction means to architecture was given by Pier Vittorio Aureli in his essay *Life, Abstracted: Notes on a Floor Plan.* He states: 'The drawn plan is (thus) not just an abstraction of architecture but a *concrete abstraction*, since together with other forms of architectural notation, the plan translates many determinations - money, measures, code, gender, class, rituals, beliefs, ideologies, environmental conditions, etc. - into a specific spatial layout. With its conventions of scale, measure, and view, the plan acts - much like money - as a "general equivalent" within which a multitude of determinations coalesce into a measurable "universal" datum.'[13] A real example of such a concrete abstraction is the office landscape in 1950s Europe. The open office floor plan was invented by the Quickborner team in order to change the working process from a Taylorist, task-driven one into a project-based one. What therefore was needed was not the hierarchical layout of row after row of offices for Fordist working procedures, but an open, flexible layout, whereby the various specific skills and knowledge of employees could become reorganised according to projects. The new office plan is an example of the shift from a disciplinary working environment as described by Foucault, into a controlled one or, better, a self-controlled one as defined by Gilles Deleuze.

FORMALISM IN ARCHITECTURE

By formalism we generally mean to understand a piece of art or architecture as something which can be studied as an autonomous work without being explained by either the curriculum of an author or by the social or political circumstances in which the work is produced. Kant argued that if we strip away any affective aspect of a work of art, as the empiricist thinks, and if we further believe that a piece of art is not reducible to deductive principles of reason, as thought by the rationalist, then what is left is a form. While formalism reorganised the discipline of art history in Germany, Switzerland, and Austria in the late 19th and early 20th century through the work of scholars like Heinrich Wölfflin, Dietrich von Hildebrandt, August Schmarzov, and others, it became introduced into architecture especially through Emil Kaufmanns 1933 book
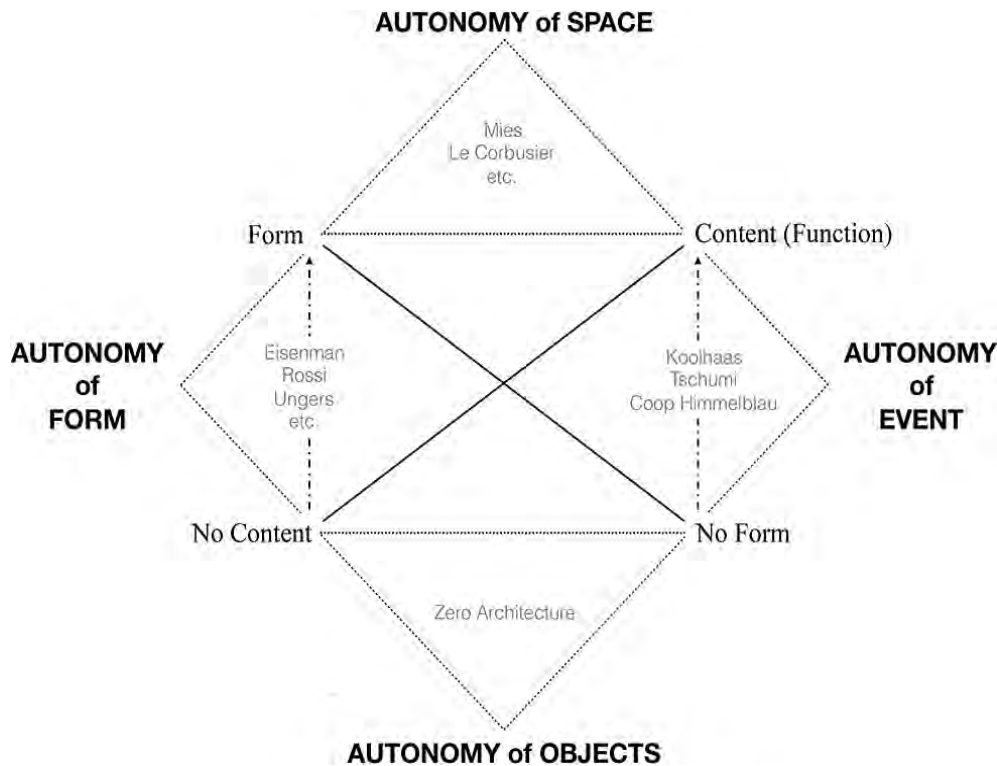
Von Ledoux bis Le Corbusier: Ursprung und Entwicklung der autonomen Architektur.

I would like to distinguish between two formalisms in architecture. One is similar to the inward-oriented materialism, which reduces buildings to their smallest formal components. This formalism sees architecture as the outcome of the composition of formal architectural elements. The second formalism is similar to the outward-oriented materialism and defines the form of a building as a model or copy of a formal idea, type, or style that is pre-given to a building through a "Zeitgeist."

The first formalism is embedded in the disciplinary problem of parts and wholes. Kaufmann divided architecture into two types of part-to-whole relationships: the "Baroque Ensemble," in which each part of a building sacrifices its individuality to the whole and behaves as a heterogeneous entity, and the "Pavilion System," in which every individual part of a building is a free autonomous element and does not sacrifice its individuality to the whole. With his idea of heterogeneous versus autonomous form, Kaufmann distinguished all architecture before and after the enlightenment on the basis of formal qualities. Reading Kaufmann, a column became, after the Baroque, an individual element liberated from the wall. The wall functioned only as the background for the figurative expression of the column through the casting of shadows.

This first formalism can be found in various readings of architecture after the 18th century. For example, Rafael Moneo argues that in adding the lantern onto the dome of the Cattedrale di Santa Maria del Fiore in Florence, Brunelleschi invented a new kind of style. Or, similarly: the various readings of architecture through part-to-whole relationships at the dawn of modernism, beginning with Jean-Nicolas-Louis Durand's *Lessons on Architecture* and its understanding of buildings as made out of "partis pris;" to Le Corbusier's Five Points of the Dom-Ino House; to the architecture of abstract elements at the Bauhaus; to John Hejduk's Cooper Union tool-kit-box of the nine square problem; and to all kinds of contemporary computational and associative design programmes, parametricisms, or neo-digital scripting projects of discrete elements. They all share, like BIM modelling, the idea that architecture is just the assemblage of parts.

The second formalism is often referred to as the formal project of the rationalist movement in architecture. The rationalists argue that behind every architectural object lies a type, a true idea, an "eidos," or an essence by which all kinds of architecture can be classified. While the topic of typological thinking in architecture is large and, I assume, mostly known to many readers, I still would like to emphasise that for typologists, the real building does not exist. What is real to them is just the "eidos" or the "Zeitgeist" of which the building is a replica. To these formalists the type is real while the physical building is just the copy or replica of the type.

AUTONOMY of SPACE

Mies
Le Corbusier
etc.

Form ···· Content (Function)

AUTONOMY of FORM

Eisenman
Rossi
Ungers
etc.

Koolhaas
Tschumi
Coop Himmelblau

AUTONOMY of EVENT

No Content ···· No Form

Zero Architecture

AUTONOMY of OBJECTS

Perhaps the only formalism that differs from the two afore-mentioned and comes closest to Kant's idea that we will never have access to the real object but can find an idea in it which is not present to us by either looking at or thinking about a building, is in the work of Peter Eisenman. In his deep formal analyses on architectural objects - for example on Palladio's - he reveals an idea, a hidden project within the work, which was absent to the original author. This sort of formalism is called dependent formalism, based on Kant's differentiation between pure and dependent beauty: pure or free beauty presupposes no concept of what an object ought to be - it is art for the sake of art - while dependent beauty presupposes a concept against which to measure the object.

MECHANOLOGY

One likely less known approach to read the emergence of architecture is based on Gilbert Simondon's thesis on Mechanology. Simondon's reading on the individuation of technical objects might be useful to the argument presented here since he gives us insight on how objects meet, and not unimportantly, that non-human or inanimate objects can have a life on their own.

Within the emergence of a new consumer society in Europe after the Second World War, cybernetics and the beginning of network theories, one of the strangest cars appeared on the market, the Citroën DS 19. While Roland Barthes was so fascinated with the magic image of the new Citroën and its external appearance that he called it a supernatural being, a quasi-

sacred object, Simondon literally opened the engine bonnet, took a screwdriver and began a de-montage of the motor.

In the late 1950s, Simondon developed a theory of technical objects, which he called Mechanology. The aim of his research was less concerned with the question of what technology does to us humans than the question: *how* is technology? Simondon investigated how technology actualises and becomes its own "Gestalt," and in particular how tools, instruments, and machines on the one hand, and factories, laboratories, and networks on the other, individuate.

An example that might be useful for the argument presented in this essay is how two separate parts of an early engine, a cylinder head and cooling gills, came to meet. Until then, a machine - like architecture - was thought to be an assemblage of heterogeneous elements each having its own form, shape, material, and functional purpose to perform a single task. When the cooling gills were added they were seen as a geometrical unit with the single function of cooling the cylinder head, and the cylinder was seen as a single unit functioning as the structural envelope of the piston to reduce the buckling of its parts. Over time, the separate objects of the cylinder head and the cooling gills melded together to become a new unique object, exchanging their formal and material properties in order for each part to take on formal and functional aspects from the other. The result is a ribbed cylinder head which can be thinner than a smooth cylinder-head with the same rigidity. In addition, a thin cylinder-head allows for more efficient thermal