On the Nature of Urban Planning

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As early as in Cleisthenes' time, in the VI and V century BC, the Athenian *polis* experienced a programme of political geometry which would characterize it as unique. The redistribution of the territory and of the calendar in a unitary way and the reform of the numerical system through the introduction of the decimal numerical system laid the foundations for the establishment of a civic sphere that allowed an effective functioning of social relations based on identity, symmetry, reversibility, balance and reciprocity, i.e. all the qualities which characterize that isonomic ideal from which what we still call democracy derives. In their turn, all these qualities derive directly from the application of geographical logic, in the sense that we have just specified (Farinelli, 2003: 156-63), to the rules for the government of the city. That involved a drastic and total reversal of all urban conceptions revolving around the cosmo-magical function (Wheatley, 1971: 463) centred on the *omphalos*, the vertical *axis mundi*, meant as the point of ontological transition through which divine force, intercepted by the ruler, entered the world: a conception that was still in force in some parts of the Earth between the XIX and the XX century (Duncan, 1990: 87). In Cleisthenes' Athens, instead of the "navel of the world", there was the *agorà*, the geometrical centre which initially was reserved exclusively for political functions (Martin, 1951: 279), for it was the mundane place where men could meet face to face, or more precisely where they could meet their peers. However, by Plato's time Athens had changed again, it was no longer like that. The democratic, secular and horizontal centralism of the *agorà* had been replaced by the religious pre-eminence of the Acropolis, whose vertical transcendence restored the hierarchical order of

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the urban context. In the same way, the return to the duodecimal numerical system had reintroduced theological archaism, and subsequently the civic space and time had become once again "the reflection of sidereal realities, so that the microcosm of the city could participate in the macrocosm of the universe". Hence the accusation against Plato's eidetic city (against his idea of city) to be from many points of view the perfect antithesis of the classical *polis* (Lévêque, Vidal-Naquet, 1964: 134-8, 141, 146), that is to say a resacralized, aristocratic city that had forgotten the principle of equality. The problem is far from being a secondary one, and since it is related to the ideal city and to its utopian significance – both questions that cannot be escaped – it is worthwhile to face it straightforwardly. In this regard, the most useful position from which to start off is that of those who have maintained that, identifying his political philosophy with his political theology, Plato simply "theorized and codified in a more rigorous way part of the truth of the real city" (Joly, 1985: 308-9). The question then is about the nature of such way and rigour.

In order to carry out his own revolution, Cleisthenes did not go beyond subduing the urban order to the needs of its geographical image. For Plato, on the contrary – and that is what his audacity consists in – the geographical image (what we call nowadays its cartographical representation) becomes the basis of metaphysics, for the Forms his "second navigation" (*Phaedo* 99 c-d) leads to are abstractions of the elements that compose such image. As any navigation, the first navigation is accomplished with, and on, the map. The second navigation, the one invented by Plato, consists in drawing the map of the map, and it is precisely such abstraction that leads him to a world till then unknown. Behind the so-called Platonic rationalism or idealism, as it has been variously defined, there is first and foremost a "desensitization" of geometry, an almost total detachment of the latter from the vocabulary of craftsmanship and from the language of craftsmen: space is no longer a concrete expanse of land, a straight line is no longer a concrete line that has been traced on the ground, and a surface is no longer what for Ulysses was still the back of a goat, and volume no is longer a solid body. Let us take into consideration the geometrical point. We have

already met its archetype: the point of an olive-tree pole, its burning extremity that signifies something which is being turned from material into immaterial. Plato accomplishes this process. From *stigmé*, the point cut by craftsmen in the matter they worked on, the geometric point becomes a *semeîon*, and the same linguistic and conceptual transformation involves the other terms[1]: that is one of the clearest and most self-evident examples of the transition from a sensible and concrete object to an abstract relation totally, or almost totally, detached from craftsmanship. After all, it is worthwhile to remember it: Plato himself writes explicitly that the *polis* is a map (*pinax*), when he argues that legislators, following the divine example, would never accept to introduce changes in the city and write its laws without having it cleaned it first, together with its previous mores and inhabitants, as if it were a tablet (*Republic*, 501a). And it seems that such as statement is meant to be taken literally, in its drastic therapeutic and cathartic sense (Vegetti, 2003: 101-3). Think about the fundamental properties of Forms: intelligibility, incorporeity, their being (in its fullest sense), their immutability, perseity and unity (Reale, 1997: 166-7).

One has to consider them, furthermore, in relation to the features a geographical representation is composed of. Once the specific existence of the world of Forms is admitted, the case of the incorporeal (*asomatos*) is the most significant, as it is the most problematic: therefore it is a perfect illustration of what it is meant here by the abstraction of the cartographic abstraction. For Pre-Socratic philosophers, something incorporeal was not only something impalpable, invisible, immaterial, but also something boundless, limitless, formless, and therefore infinite (Gomperz, 1932: 153-157): thus, it could not be represented in cartographic terms, neither could it be thought of in physical terms. However, the objects on a map are incorporeal, yet at the same time they are visible; therefore incorporeal things do exist, but they retain a form, although this is still related only to the sensible level. So, in the transition from sensible to intelligible, from physical to metaphysical, there would be no possibility to carry on thinking of incorporeal things if not in the guise of an abstraction from the geographical form, starting off from the

graphic trace: a sort of degree zero or free zone where the intelligible and the sensible meet by means of their extreme forms, the initial and the final one, and get into contact with one another, thus giving birth to the new world. It is this abstraction, and only this abstraction, that produces the *loghismos nothos*, the "bastard reasoning" that squeezes in between the way of science and the way of opinion. This third way is spurious and illegitimate precisely because it stands in the middle between the sensible and the intelligible level, and its features are incorruptibility and the capacity to "provide a place for all things that are born", even though "it can hardly be believed", and in any case never through sensibility, but always through an "altered reasoning". Yet it is necessary – explains Plato – because it is the only one which allows us, precisely thanks to its being in the middle between being and generation, to "maintain that it is necessary that all that is in a place and occupies a certain amount of space (*chōra*), and that what exists neither in the sky nor on Earth is nothing" (*Timaeus,* 52 a-b). That is exactly the way Kant would later on call in his *Critique* "the transcendental schema", a third element which is homogeneous on the one hand with the category, on the other with the phenomenon, thus allowing the application of the first to the second, pure mediating representation, at the same time on the intellectual and on the sensuous side.[2] In other words: Plato's *chōra*, i.e. the receptacle, the object that poses the question of the "bastard discourse", is nothing but the geographical representation (namely, the map) of the world; more precisely, it is the whole made up of the map and of the *pinax* which bears its image on it, thus producing the duplicity of being itself. It is the necessary implication of an understanding of the world based on the idea of copy (Gadamer, 1984: 107), which is the entity for which the distinction between sensible and intelligible is not valid, as it escapes such opposition (Derrida, 1993: 21).

The term *chōra* appears for the first time in *Timaeus* (22e) and is related to the area around the citadel where the guardians of the State live; it has therefore been argued that ever since the beginning such a term has denoted a place on the margins of what can be built, marking the boundary of the things whose

production can be controlled (Sallis, 1999: 19). Even in this case, the intension of the note is more important than its extension, signaling that the transition the "bastard reasoning" allows is a movement for which the subject is, from the epistemological point of view, only partially responsible. And anyway it is thanks to it that for Plato – in Giovanni Reale's words – "the incorporeal becomes a de-termined being that acts as de-termining cause, i.e. the real cause": for it transcends not only the features of physical objects, but also their own material source, thus coinciding with the non-physical cause of physical causes (Reale, 1997: 172), i.e. with the logic of what Bateson (1984: 21) used to define "the connecting structure". This coincidence eventually reveals how the *logos* is not the word and not even the number (Zellini, 2009), but the tablet, namely the whole of the sequences of thought that the latter contains and produces (Farinelli, 2007). The *logos* is the main thesis of Plato's *Republic* (Friedländer, 2004: 829), and the dialogue ends with a description of the geographical representation of the world, or more precisely of the anti-world that one has to go across to come back to the world and get embodied again: in short, it is the path that leads from the intelligible back to the sensible. It is the last stop in the underground trip on the way to reincarnation, a trip that takes a thousand years and that, according to Er of Pamphylia, ends on the Plain of the Lethe (the Plain of Oblivion). Before reaching it, the souls of the dead have to pass under the throne of Adrasteia, Lady Necessity, the goddess that dominates the universe (*Orpheus*, fr. 13 Diels-Kranz) by wrapping around it in the form of so transparent a film as to prove invisible. And the extreme ordeal, the one that immediately precedes the rebirth, consists in drinking "moderately" the water of the river Amelethe that crosses this strange plain, scorched and heated, barren of trees and of any other thing the earth might feed. However, even more surprising is the water of this river, and not only because it brings about oblivion, but also because, despite being drinkable (indeed, Er can remember all precisely because he does not drink it), it cannot be poured into any kind of container, and no jug is able to contain it (*Republic*, 621). Indeed it is a country different from any other, a totally

empty plain, barren of anything that grows on earth, and the one thing that distinguishes it from a *tabula rasa* is this river whose water only bodiless soul can drink: obviously because its water, like souls, does not exist in a material sense, or more precisely because they are both in a limbo between the material and the immaterial, the sensible and the intelligible; just like any geographical representation. The same applies to Plato's well-known myth of the cave, a myth that – before being cinema, as Serres (1993: 81) put it – is the map, in the sense that the former is the mechanical version of the latter: in both cases the image depends on the projection, and it is indeed the projection that plays the main role, for the movement of shadows on the wall that enables us to use the cinematographic metaphor is of minor importance, when compared to the dimensional subtraction and to the amputation of depth.

The world of Forms is the abstraction of the cartographic abstraction, the geographical image of the geographical image. That is the reason why Plato presents in *Phaedo* "the map of the metaphysical project" (Reale, 1997: 138, 163, 215, 316), that would influence in a decisive way all subsequent Western thinking, forcing it to adhere to it or to reject it. In the same way as in the *Republic*, when he discusses the metaphor of the straight line, he literally projects the programme of dialectics as "a complete map of all possible models of mathematical beings", a device that, apart from being ontological, is also a normative and axiological one, founded on principles that are self-evident (Findlay, 1994: 169). It is worth noticing that Plato's fundamental distinction between the level of sensible reality and the level of intelligible reality – i.e. the reality of Forms – was originally determined by the action of a verb (*paraskeuazo*: its opposite is *kataskeuazo*) that literally means "to order what you have not got yet": therefore, the whole sentence means that the one who knows the things best is the one who already has an order by which to classify what he can see. In other words, within the framework of the epistemological process, the order of the things precedes the actual things, and only those who can see with the mind's eye, "breaking the contact and the communion with the body" and "taking advantage of pure

reason in itself and for itself" are able to reach the knowledge of being in its purity (*Phaedo*, 65 c 2-66 a 10). So far, it would be possible to support my point by a quick but indirect overview, following a thread that starts from Aristotle (himself a student of Plato's)[3] and goes across most of modern philosophical culture (Farinelli, 2009: 66, 77), namely the idea that the soul (the mind, the conscience) is a tablet; if one postulated that Plato modelled the soul according to the schema of the tablet, it would be quite easy to attribute a geographical nature to the order of which the mind's eyes are, platonically, the bearers. I am fully convinced that it is precisely like that, and that is why I will support my point following a more direct and longer thread that crosses Plato's whole system in its most delicate part, thus allowing us to be more precise.

Let us take that complex passage in *Timaeus* (34 b10- 36 c 6) wherein Plato explains how God shaped the soul by mixing up three different kinds of realities (Being, Sameness and Difference), in order to produce one single Form. It is worth highlighting that, according to Plato, it is in such a way that the synthetical and mediating reality *par excellence* is shaped: the most conspicuous one, the one that makes up the intermediate sphere between the sensible and the intelligible, i.e. the one that, in accordance with the argument supported so far, corresponds to the geographical image. It is that passage that resounds in Serres's pages where the latter opposes the automorphism of the baker, who starts with a square dough and always comes back, with his manipulation, to the original square form, to the ability of the woman baker who, also by constantly cutting, imparts a Brownian movement to all points that compose the dough, thus including in it its time, circumstances and fluctuations (Serres, 1993: 88-91). The action of the Demiurge is closer to the woman baker's than to the baker's, and the final result, the "world soul" that hierarchically pre-exists the world and therefore governs it, is a whole made up of many factors that are all intermediate beings between the ideal and the phenomenical (Reale, 1997: 660-1; Cherniss, 1962: 409, n. 337). Moreover, divine manipulation imposes on it a capacity to move in a harmonic way which is governed by numbers, for it takes away some parts

of the initial mixture in accordance with proportional intervals and it fills them up with bonds of the same nature, so that it reconfigures the whole original mixture. But the decisive operation is yet to be accomplished. Having done all this, indeed, the Demiurge divides into two parts all the mixture along its length, then he juxtaposes them so as to form an X, unites each bar with itself and subsequently the two bars with each other in the point opposite the first intersection; finally, he wraps them round so as to form two circles, an internal and an external one. Plato's description goes on, because the process is not accomplished yet, but we need not go on following him on this. For us what is most important, instead, is the fact of recognizing in the Demiurge's work the model of the squaring of a sheet, a practice without which no geometrical sign could exist, as it is such squaring that allows the *tabula rasa* to receive it: the tablet, the map could hardly contain the uncertain traces of our free hand, its trembling expression, let alone the more imperious sign imposed by a set square or by compasses, without the intervention of such a ritual. Where does the X come from, the crucial chiasmus that God entrusts with the decisive movement for the construction of the world soul, if not from the two diagonals that we first have to trace on the paper in order to move from ornate drawing to geometrical drawing, thus founding and establishing the geographical image of the world? They are but an extension, made in accordance with the rule of bilateral symmetry of the two semi-diagonals represented by Polyphemus's body lying on the ground and the pole stuck into his eye: the pole in Euclid's geometry becomes the set square, whereas the eye's originally central function (Farinelli, 2003: 4-5) is here transferred to the intersection of the chiasmus, giving birth to the authentic connecting link between the metaphysical and the physical world, what the Renaissance Neo-Platonists would later call the "copula mundi" (Reale, 1998: 261) and that we today thoughtlessly, if not carelessly, call map.

It is worth remembering that Polyphemus's eye has never ceased to exist. For Helmholtz the "Cyclops eye" was a geometrical concept, the non-existent eye between the two real ones that could explain, through the juxtaposition of the retinas, the

identity of binocular directions (Hering, 1964: 232). Nowadays such phrase denotes something endowed with a concrete neuroanatomic existence, a central phase in the process that takes place beyond the retina, within the black box (the eye cavities) of our visual system: the stereoscopic fusion of what the external eyes see, which attributes a precise, determined and distinct form to what the latter actually perceive as a jumbled whole of lines and points (Julesz, 1971). So, for example, the Cyclops eye regularly opens wide whenever, in order to reach a site, we point the lens of our Internet-connected mobile phone to an undecipherable little square in black and white printed on a paper. Not only does it survive in a technological form, but also in a form which is directly political. If one thinks about it, it is precisely its presence, the heat still emanating from the hierarchical logic it embodies, which prevents anyone from staying for too long at the centre of the *agora* or of the assemblies described in Homer's poems, forcing them to cede their place to their fellow men, their peers: it is the principle that moves from isonomy to democracy, the system in which nobody can stay for too long in the burning position corresponding to Polyphemus's eye, which is still alive and marks in depth the point from where everything began. It is the "enlarged point" about which, at the beginning of the XVIII century, Leibniz (1960: 348) argued with Des Bosses whether it was divisible or not. But is it the eye (and maybe it is not by chance that in German the word for "eye" is *Auge*) or the face? It is in such cyclopean indeterminacy, in such founding ambiguity that lies the material reason of the *civitas augescens*, the growing city by definition: the Roman idea, strongly expressed in the Imperial age, which in the Justinian Code synthesizes demographically, spatially and temporally the historical and systematic framework related to the growing generalization of citizenship (Baccari, 2005: 23 and following). It is true that the *polis*, unlike the Roman city, faces the opposite problem: it has to remain rooted to its own *génos*, to its own people, for otherwise too wide an enlargement may undermine any possibility to build up a democratic process (Cacciari, 2006: 16-17). But that does not eliminate – quite the contrary – the intrinsic duplicity of the urban model, the unsteady

interchangeability of its limits, something that Rome had already heralded in its early age, when it was characterized by the double system of the *pomerium* and of the surrounding wall. From the point of view of the *urbs*, its last incarnation is the phenomenon currently known as urban *sprawl*, the indiscriminate and widespread urban growth that seems to go beyond any control and modelization.[4]

If that does not happen it is simply because "the conceptual framework within which planners work has been designed to evade the issue of imposing any order of an extra-economic nature on the city", as Rykwert puts it (1976: 24). That is often true, and there is a precise reason for it: the psychological repression of the great early XIX century lesson imparted by Carl Ritter's and Alexander von Humboldt's *Erdkunde*: according to them, the question was precisely how to establish a scientific discourse that was aware of the productive function (in the sense of ideation) of the cartographic imposition, whose weapons indeed ought to be "philosophy, history, language" (Farinelli, 2009a: 102-11). Such a psychological repression is fully achieved with the founding of human geography, or Vidal de La Blache's *géographie humaine* (Farinelli, 1981: 15-23; Berdoulay, 1981), whose task is "describing" the cartographic image and therefore "defining, classifying, then deducting": that corresponds to the "methodological succession" of science, as the "topographic map is an instrument of precision, the exact document that corrects false notions" (Vidal de La Blache, 1904: 120; Vidal de La Blache, 1913: 298). It is not by chance that it was precisely to those years and to such a context that the birth of the term "urban planning" dates back (Choay, 1973: 4, n. 2). For Plato, the only theoretician of the geographic image before Kant, the latter was only the starting point of the first phase of the "second navigation", therefore the first step for an ascending path that, through the second phase of the course leading from the theory of Forms to the ultimate postulates described in *Phaedo*, founded the theory of Principles; in the same way as the sphere of sensible multiplicity depended on the sphere of Forms, the plurality of the latter depended on a further level of reality: the supreme, absolute reality, the level of the One (principle of

formal determination) and of the indefinite Duality of Large-and-Small (principle of indefinite variability) (Reale, 1997: 216 and following). One might usefully argue that such principles have a geographic nature as well, for they are an abstraction of the ideal abstraction, or in other words, that their origin is a cartographic one, but that would go beyond our intentions here. Anyway, it is due to such principles that in the city Plato talks about in *Gorgias* (507e-508b) and in the *Laws* (745 b-e), for example, the city that fully realizes the model of geometrical equality, the possessions of each citizen are positioned in such a way as to be located, on the whole, at one average distance from the centre: the cartographic representation, embodying an idea of city, by its nature refers to an ultimate foundation, a set of ultimate postulates it depends on, for the order it embodies and transmits derives from such foundation. Therefore, one cannot ignore this original meta-ideal burden of which any geographical image is the reflection; ignoring it, in fact, involves the unaware heterodirection of all thoughts and actions for whoever, without any further reflections (i.e. unawarely), entrusted it with the task to determine the conditions of one's cognitive and operative relation with the world. Such awareness indeed disappears with the end of German critical geography in the early XIX century, whose place is taken over in the XX century by the most careless and thoughtless, i.e. unaware, cartographic practices, in which urban planners indulge even more than geographers.

By urban planning, in sum, I mean the whole of the views and practices related to towns and cities, unawarely founded on what Hilary Putnam calls "metaphysical realism": according to this worldview, the world consists of a certain fixed whole of objects that are independent from our mind, there is but a single truthful and complete description of the world (in this specific case, the cartographic description) and truth implies "some sort of correspondence relation between words, or thought-signs and external things and sets of things". For Putnam such a perspective, defined as "externist", is that of "God's Eye", and is so called because it does not correspond to anything which might be realistically known or imagined (Putnam, 1981: 49 and following). It can be said in a quite shorter, yet almost perfectly

equivalent way: urban planning is any practice or view that unawarely takes the cartographic image as an objective representation of the city. That such knowledge – when it is conscious – borders on exclusively divine knowledge, is what is first and foremost represented in Vermeer's *Art of Painting*: this painting is to be read as a conscious illustration of the epistemological process according to Leibniz, i.e. a diagonal movement through progressive distinctions from the first level towards the clear light of the last level, dominated by Visscher's large *Map of the Seventeen Provinces*, representing Leibniz's clear and distinct knowledge, which is potentially adequate and symbolic and is the extremest level of human gnoseology. Man cannot go beyond that, according to Leibniz, precisely because he cannot draw on the supreme form of knowledge, which is therefore reserved to God: knowledge that is both clear and distinct, adequate and intuitive (Farinelli, 1995: 145-51). Indeed, Leibniz sees the cartographic image within the framework of a general theory of knowledge, in accordance with what Putnam calls an "internist perspective", namely a system based on the consistency of our beliefs (*Glauben*, as Ritter (1852: 26) would have put it) with our experiences and on the conscious representation of the latter through the first, rather than on a correspondence with a "state of things" that is independent from mind and discourse, with a cartographic state of things. It is in the transition from an internist to an externist cognitive attitude that the possibility of thinking the global city was lost in the modern age. We are forced to think about it again, and that is a good reason to try and understand what happened. But in that regard we are still at the very beginning.

Notes

[1] Mugler, *Platon et la recherche mathématique de son époque*, Heitz, Strasbourg-Zürich 1948, pp. 5-42, see in particular p. 21.

[2] I. Kant, *Critique of Pure Reason*, B 177 A138. It is precisely the analogy with Kant's schema that makes us disagree with those who, despite developing the topic of resemblance and trace in the "bastard reasoning", insist on the "not

sensible" character of the trace: see R. Ronchi (2001), *Il pensiero bastardo. Figurazione dell'invisibile e comunicazione indiretta*, Marinotti, Milano, pp. 53 and following.

[3] *Metaphysics*, I, 9, 992b33; *De Anima*, III, 4, 429a

[4] For an overview of the current debate, see: G. Dematteis, *Conurbazione disgregata e sistemi locali territoriali*, in P. Bonora - P.L. Cervellati (eds.), *Per una nuova urbanità. Dopo l'alluvione immobiliarista*, Diabasis, Reggio Emilia, 2009, pp. 44-59.

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