MODERN SYSTEMS. ARTISTIC LIMITATION OF MODERN CITY PLANNING

Camillo Sitte


The publication at Vienna in May 1889 of *Der Städtebau nach seinen künstlerischen Grundsätzen* (*City Planning According to Artistic Principles*) began a new era in Germanic city planning. Its author, Camillo Sitte (1843-1903) strongly criticized the current emphasis on broad, straight boulevards, public squares arranged primarily for the convenience of traffic, and efforts to strip major public or religious landmarks of adjoining smaller structures regarded as encumbering such monuments of the past.

Sitte proposed instead to follow what he believed to be the design objectives of those whose streets and buildings shaped medieval cities. He advocated curving or irregular street alignments to provide ever-changing vistas. He called for T-intersections to reduce the number of possible conflicts among streams of moving traffic. He pointed out the advantages of what came to be known as "turbine squares"--civic spaces served by streets entering in such a way as to resemble a pin-wheel in plan.

His teachings became widely accepted in Austria, Germany, and Scandinavia, and in less than a decade his style of urban design came to be accepted as the norm in those countries. There were, of course, critics of this approach, and ultimately the kind of carefully studied informality that Sitte endorsed came itself to be regarded as old-fashioned. Nevertheless, from 1890 until the outbreak of the First World War, the majority of the numerous extension plans for enlarging the rapidly growing cities of Germany incorporated all or some of the elements so strongly supported by Sitte and his followers.

Modern systems!--Yes, indeed! To approach everything in a strictly methodical manner and not to waver a hair's breadth from preconceived patterns, until genius has been strangled to death and *joi de vivre* stifled by the system--that is the sign of our time. We have at our disposal three major methods of city planning, and several subsidiary types. The major ones are the *gridiron system*, the *radial system*, and the *triangular system*. The sub-types are mostly hybrids of these three. Artistically speaking, not one of them is of any interest, for in their veins pulses not a single drop of artistic blood. All three are concerned exclusively with the arrangement of *street patterns*, and hence their intention is from the very start a purely technical one. A network of streets always serves only the purposes of communication, never of art, since it can never be comprehended sensorily, can never be grasped as a whole except in a plan of it.... They are of no concern artistically, because they are inapprehensible in their entirety. Only that which a spectator can hold in view, what can be seen, is of artistic importance, for instance, the single street or the individual plaza.

It follows simply from this that under the proper conditions an artistic effect can be achieved with whatever street network be chosen, but the pattern should never be applied with that really brutal ruthlessness which characterizes the cities of the New World and which has, unfortunately and frequently, become the fashion with us. Artistically contrived streets and plazas might be wrested even from the gridiron system if the traffic expert would just let the artist peer over his shoulder occasionally or would set aside his compass and drawing board now and then. If only the desire were to exist, one could establish a basis for peaceful coexistence between these two. After all, the artist needs for
his purpose only a few main streets and plazas; all the rest he is glad to turn over to traffic and to daily material needs. The broad mass of living quarters should be businesslike, and there the city may appear in its work-clothes. However, major plazas and thoroughfares should wear their "Sunday best" in order to be a pride and joy to the inhabitants, to awake civic spirit, and forever to nurture great and noble sentiment within our growing youth. This is exactly the way it is in the old towns. The overwhelming majority of their side streets are artistically unimportant, and only the tourist in his exceptionally predisposed mood finds them beautiful, because he likes everything he sees. Just a few thoroughfares and major plazas in the centers of towns stand up under critical appraisal--those upon which our forefathers lavished wisely, and with all means at their disposal, whatever they could muster of works of civic art.

The artistic possibilities of modern systems of city planning should be judged from this standpoint, viz., that of a compromise, since it has already been made quite clear that the modern point of view rejects all demands made in the name of art. Whoever is to be spokesman for this artistic attitude must point out that a policy of unwavering adherence to matters of transportation is erroneous, and furthermore that the demands of art do not necessarily run contrary to the dictates of modern living (traffic, hygiene, etc.).

The grid plan is the one most frequently applied. It was carried out already very early with an unrelenting thoroughness at Mannheim, whose plan looks exactly like a checkerboard; there exists not a single exception to the arid rule that all streets intersect perpendicularly and that each one runs straight in both directions until it reaches the countryside beyond the town. The rectangular city block prevailed here to such a degree that even street names were considered superfluous, the city blocks being designated merely by letters in one direction and by numbers in the other. Thus the last vestige of ancient tradition was eliminated and nothing remained for the plan of imagination or fantasy. Mannheim assumes the credit for the invention of this system. *Volenti non fit injuria* (No injury is done to a consenting party). One could fill volumes recording the censure and scorn that have been lavished upon its plan in innumerable publications.

In the light of what we have seen it is hard to believe that this very system could have conquered the world. Wherever a new town extension is being planned this method is applied--even in radial and triangular systems the subsidiary nets of streets are organized this way in so far as possible. It is the more remarkable because this very arrangement has long been condemned from the point of view of traffic; Baumeister contains all that has been said to date on the matter. Aside from the inconveniences which he mentions, only one more, which seems to have been overlooked, will be pointed out here, namely the disadvantage of its street crossings for vehicular traffic. To this end let us first examine the traffic pattern where merely one
street opens into another (Fig. 82). In the illustration it is assumed that traffic drives on the left. Thus a vehicle driving from A to C may pass another from C to A or from C to B, as well as from B to A and B to C. These make four encounters. In addition four encounters arise with a vehicle driving from A to B. With vehicles driving from B to A there are only two new encounters. The two others drop out because they are already contained in the earlier series, for it is the same if a vehicle driving from B to A encounters one driving from A to B, or the reverse. Likewise with the vehicles driving from B to C only two new encounters results, and with driving directions C to A and C to B there are no new variants. Avoiding duplications, then, the following twelve situations are possible:

A B against B A
*A B against B C
*A B against C A
A B against C B
A C against B A
A C against B C
A C against C A
A C against C B
B A against C A
B A against C B
*B C against C A
B C against C B

By checking each of these twelve encounters in Fig. 82, one can easily see that those designated with an asterisk are such that their two trajectories intersect. The little circles represent these three bad traffic situations wherein a traffic delay may result since one vehicle has to pass by before the other can proceed. However, three such awkward situations are still allowable, because in light traffic a congestion would rarely result. This opening of just one street into a second (usually a broader and more important one) is the most common case in old towns, and at the same time the most advantageous for traffic.

The situation is much worse when streets actually cross completely (Fig. 83). Here the various encounters, diagrammed and calculated without duplication, come to 54, among which occur 16 cases of intersecting traffic trajectories. This is more than five times as many crossings and possible traffic disruptions as before. The course of a single vehicle driving from B to C is cut by four others, and the vehicle moving from C to D comes at it exactly from the side. Therefore at such crossings, when they are very busy, drivers must go at a slow pace, and anyone who drives about much in carriages knows that in the modern sections of town he is often slowed down, while in the narrow alleys of the old part of town, crowded with traffic as they are, he can proceed quite nicely at a trot. This is reasonable because a street seldom crosses there, and even simple street openings are relatively infrequent.

For pedestrians the situation is even worse. Every hundred steps they have to leave the sidewalk in order to cross another street, and they cannot be careful enough in looking to the right and left for vehicles which may be coming along every which way. They miss the natural protection of uninterrupted house fronts. In every town where a so-called corso or promenade has developed, one can observe how a long continuous row of houses was instinctively chosen as side-protection, since otherwise its whole pleasure of strolling would be spoilt by the constant lookout for cross traffic....

But what marvelous traffic conditions arise when more than four thoroughfares run into each other! With the addition of just one more street opening to such a junction, the possible vehicle encounters already total 160 which is more than ten times the first case, and the number of crossings which disrupt traffic increases proportionately. Yet what shall we say about traffic intersections where as many as six or more streets run together from all sides, as in Fig. 84? In the center of a populous town, at certain busy times of day, a smooth flow of traffic is actually impossible, and the authorities have to intervene, first, by stationing a policeman who, with his signals, keeps the traffic precariously moving. For pedestrians such a place (Fig. 85) is
truly hazardous, and in order to eliminate the worst dangers, a round piece of sidewalk is raised in the middle--a small safety island on which a beautiful slender gas light rises like a lighthouse amidst the stormy waves of the ocean of vehicles. This safety island with its gas lamp is perhaps the most magnificent and original invention of modern city planning! In spite of all these precautions, crossing the street is advisable only for alert persons; the old and the frail will always by preference take a long detour in order to avoid it.

These, then, are the achievements of a system that, relentlessly condemning all artistic traditions, has restricted itself exclusively to questions of traffic. Its monstrous street junctions are called "plazas," yet in them everything is avoided that would make for character in a plaza, and at the same time everything seems to be accumulated that is impractical and ugly. These are the consequences of design based on traffic considerations rather than, as it should be, on the arrangement of plazas and streets.

In the gridiron system junctions like this result wherever the difficulties of terrain or a need to relate to what already existed before require deviations or breaks in the checkerboard pattern; triangular so-called plazas come into existence, as seen in
Figs. 78-80. These occur even more frequently in the application of the radial system or in mixed systems. (See Fig. 86.) They become the greatest glory indeed of new layouts when they are completely regular: in circular form (Fig. 87), or octagonal as
in the Piazza Emmanuele in Turin. Nowhere can the bankruptcy of all artistic feeling and tradition be more clearly perceived than here. In plan such a plaza appears, of course, to be nicely regular, but what is the consequence in reality? Vistas opening out along a thoroughfare, which the ancients avoided so artfully, have here been used as much as possible. The traffic junction is also a junction of all lines of sight. As one circles the plaza he always sees the same panorama, so that it is never exactly clear where one is standing. A stranger has only to turn around once on such a disconcerting merry-go-round of a plaza and immediately all sense of orientation is lost. On the Piazza Vigliena (Quattro Canti) in Palermo even the elaborate decoration of the four corners does not help, since they are all alike. Although only two major streets intersect perpendicularly on this octagonal plaza, one still finds strangers frequently turning into one of them to look for the street name or a familiar house, thus to regain their orientation. In reality all that is attained is a complete loss of our bearings, a monotony of vistas, and an architectural ineffectiveness. How odd a whim of the old masters to have ascribed importance to the avoidance of such things!

This type of plaza, along with its safety island and gas light or columnar monument, found its earliest manifestation in Paris.
(...Fig. 88) although none of the modern systems we have described happened to be rigorously carried out there during the last big renovation of the city. This was due in part to the intractable nature of the existing layout and in part to the tenacity with which fine old artistic traditions had preserved themselves. Different procedures were followed in various parts of the city, and, if nothing else, one can suggest that a certain remnant of Baroque tradition served as a common basis. The striving for perspective effects has obviously continued, and we could designate as the backbone of the system the broad avenue closed off in the distance by a monumental structure.... Later the modern motif of the ring-boulevard was added to this, and a certain vigorous clearing out or breaking through of the dense mass of old houses was required by the circumstances. This remarkable reorganization, carried out on a large scale, became almost a fad, first and most frequently observable in the large cities of France.

The Place Juan Juares at Marseilles (Fig. 89) should be mentioned as an example of the ruthless carving of a plaza out of a web of crooked streets. The Place du Pont at Lyons (Fig. 86) and other similar ones should also be noted. This practice has
something vaguely in common with Nero's radical rearrangement of Rome, although, of course, considerably more modern in character. Avenues and ring-boulevards were developed at Marseilles; at Nimes (Cours Neuf, Boulevard du Grand Cours, Boulevard du Petit Cours); at Lyons (Cours Napoleon); at Avignon (Cours Bonaparte); and in other cities. In Italy a similar broad artery with several traffic lanes and shaded walks is called a corso or largo. Broad circumvallating boulevards were usually developed on the circuit of abandoned fortifications--in Vienna, Hamburg, Munich, Leipzig, Breslau, Bremen, Hanover; at Prague between the Altstadt and the Neustadt; at Antwerp; as a pentagon at Wurzburg (Juliuspromenade, Hofpromenade, etc.) and elsewhere. The avenue as a very old and independently developed motif is, for instance, to be found in the Langgasse at Danzig; the Breite Gasse at Weimar; the Kaiserstrasse at Freiburg; the Maximilianstrasse at Augsburg; Unter den Linden in Berlin. The Jagerzeile in Vienna [now Praterstrasse] is representative of such broader avenues developed for their long vistas, and the Graben there will, after its redesigning is completed, be transformed from a plaza into such an avenue. These are forms in modern city planning that are still artistically effective and are truly in the spirit of the Baroque.

However, as soon as the geometric pattern and the building block became dominant, art was forced into silence. The modernizing of Gotha, Darmstadt, Dusseldorf, the fan-shaped plan of Karlsruhe, etc., are examples of this. The absence of pedestrians on so many modern gigantic streets and plazas (the Ludwigstrasse in Munich, the Rathausplatz in Vienna) in contrast to the crowds in the narrow alleyways of the older parts of towns, demonstrates unequivocally how little the matter of traffic received its due consideration in such city expansions, although supposedly everything was based on just that. Whereas new broad streets are laid out on the periphery of the city where dense traffic is never likely to develop, the old city center remains forever congested.

This should be proof enough that the exponents of an exclusively traffic-oriented point of view, despite occasional success, are not justified in throwing to the winds as useless the assistance of art, the teachings of history, and the great traditions of city building.

One more important motif of modern planning remains to be mentioned. This is the matter of tree-lined avenues and gardens. Without doubt they constitute an important
hygienic factor, and they also afford the undeniable charm of landscape elements in the middle of a big city and, occasionally, a splendid contrast between groups of trees and architecture. Yet it is open to question whether they are placed at the right spots. From the purely hygienic aspect the answer seems quite simple: the more greenery, the better—that is it in a nutshell. Not so from the artistic point of view, for the question arises as to where and how the greenery is to be applied. The usual and most felicitous application is to be found in the residential sections of modern cities, as in the justly famous residential belt around Frankfurt a.M., the Cottage Anlagen of the Währing district in Vienna, the similar annexes to the old part of Dresden, etc., as well as the indispensable villa areas at every spa: Wiesbaden, Nice, etc.

However, the closer such landscape elements encroach upon the center of a large city, and especially upon large monumental structures, the more difficult it becomes to find a universally satisfactory and artistically faultless solution. Modern naturalistic landscape painting is not suitable for monumental purposes; when it is used as a background for great mythological and religious representations or in the interiors of monumental buildings or churches, there necessarily arises an uncomfortable conflict between the Realism of style and the Idealism of subject matter, which no device, however clever, can relieve. In just the same way, the penetration of the English park into the major plazas of a city produces a conflict between the principles and effects of naturalism and the rigor of a monumental style. An awareness of this contradiction and a wish to avoid it were the forces which brought into being the Baroque park with its trimmed trees; an architectonically disciplined nature was used in former times primarily in connection with the chateau, whereas the larger monumental city-squares of classic times, of the Middle Ages, and of the Renaissance were exclusively focal points of creative art and especially of architecture and sculpture. Just how annoying the planting of trees in front of such works can be--above all on shabby, sickly boulevards—is to be seen in any photograph.... Photographs are always of winter views, so that important architecture is at least partly visible between the bare branches; in fact, a drawing is frequently preferred to a photograph because with the former any disturbing trees can be left out entirely. Should they not, for the same reason, better be left out in reality, too? What value does an open plaza have as a perspective space when it is congested with foliage?

From this derives the principle that trees should not be an obstruction to the line of sight, and this rule in itself requires a return to Baroque models.

Complete adherence to this strictly artistic principle is impossible in modern city planning since it would put an end to almost all tree planting. Just as for monuments, we have no proper place for trees. The cause of this evil is the same in both instances—namely the modern building block. It is quite astonishing how many delightful small gardens are to be found in the interior of the building lots of old towns; one has no suspicion of their existence before entering the courtyards and rear areas. What a difference between these small private gardens and most of our public parks today! The old private garden, customarily connected with several adjacent ones, all of which are guarded from the wind and dust of the streets by the enclosing facades of high buildings, provides a really refreshing coolness and, insofar as possible in the big city, clean dust-
free air. It is truly a garden for the relaxation of the owner, and it is a blessing for all the surrounding interior apartments which thereby receive better air, daylight, and a pleasant view into the greenery. In contrast to this, the interior room of a modern apartment building—with its view into narrow, stuffy, dark and frequently bad-smelling courts, so filled with stagnant air that the windows are forced to remain shut—is a dungeon of the most disagreeable sort, which repels all tenants and increases the demand for outside apartments, much to the detriment of our building projects. The modern public garden, being surrounded by open streets, is exposed to wind and weather and is coated with street dust, unless somewhat protected by its enormous size. Thus it happens that all these open modern parks fail completely in their hygienic purpose and are actually shunned by the public because of their dirt and heat, especially during the warm summer-time.

The fundamental reason for this is again the abominable block system, since gardens should also, just like buildings and monuments, follow the example of the ancients—not standing free in the middle of empty spaces but being built in. As an example of such an inappropriate planting of trees, the plaza behind the new Bourse in Vienna should be mentioned.

Hygienically speaking it is certainly quite indifferent whether these few trees stand there or not, since they provide neither shade nor coolness; rather they can scarcely be prevented from dying on account of the heat and dust. They only succeed in obstructing the view of the Bourse building. Would it not be better then to save the useless waste of a meager tree planting at such a place and instead create real gardens which for their own preservation are enclosed and, most important, do not lie open to the street? Wherever private gardens that formerly belonged to palaces have been given over to public use, one can see for oneself that, secluded from traffic, such gardens fulfill their hygienic purpose despite their small size and vegetation thrives. The uselessness of widely spaced greenery on streets and especially on public walks is demonstrated clearly enough by the fact that on hot summer days promenaders saunter not on these walks, but along the footways of the Ringstrasse, the avenues, etc. The principal value would consist in spraying the leaves with water so that during heatspells they could serve as an evaporating, and hence an air conditioning apparatus. Even this slight profit would be enough to justify street greenery wherever possible. However, in front of monumental structures the file of trees should be interrupted, since here aesthetic considerations are certainly much more important than their small hygienic value, and, as the lesser of two evils, the row of trees should be broken.

That this schism between the old and the new approach also occurs in the field of horticulture allows us now to recapitulate. The effective enclosure of space, deriving as it does from the historical evolution of an original unbroken street front (such as still exists today in villages), continued to be the basis of all dispositions in the old towns. Modern city planning follows the opposite tendency of dissection into separate blocks—building block, plaza block, garden block—each one being clearly circumscribed by its street frontage. From this develops a powerful force of habit: the desire to see every monument in the center of a vacant space. There is method in this madness. The ideal behind this planning could be defined mathematically as a striving for the maximum of frontage line,
and herein would appear to lie the creative impulse behind the modern block system. The value of every building site increases with the length of its street frontage, the maximum value for building lots in the parcelling of land being therefore achieved when the perimeter of each block of buildings is greatest in relation to its area. Thus from a purely geometrical point of view circular blocks of buildings would be the most favorable, and, indeed, in the same configuration as that in which large balls of equal size can be pushed the closest together, namely six around one in the middle. In arranging straight streets of identical width between such blocks, the circular forms would be transformed into regular hexagons, as used in tile patterns or in the honeycomb. One could not believe it humanly possible that an idea of such really oppressive ugliness, of such appalling tediousness, and of such a labyrinthine lack of orientation would actually be carried out. Yet, incredible as it seems, it has become a reality in Chicago.

That then is the essence of the block system! In it art and beauty are no more. To arrive at such extremes is impossible in the Old World where we are used to the beauty and the coziness of old towns. However, many of their charms are already irretrievably lost for us since they no longer harmonize with modern living. If we do not wish to let this situation get out of hand, but still want to save as much as possible of artistic value in the layout of cities, we must be clear in our own minds as to just what can still be retained and what has to be dropped....

Modern city planning is obliged to forego a significant number of artistic motifs. Regardless of how painful this may be to sensitive souls, the practical artist should not let himself be guided by sentimental impulses, because no artistic planning could be a thorough or lasting success unless it complied with modern living conditions. In our public life much has irrevocably changed, depriving certain old building forms of their original purpose, and about this nothing can be done. We cannot alter the fact that marketing has withdrawn more and more from the plazas, partly into inartistic commercial structures, partly to disappear completely because of direct delivery to the home. We cannot prevent the public fountains from being reduced to a merely ornamental role; the colorful, lively crowd stays away from them because modern plumbing carries the water much more conveniently directly into house and kitchen. Works of art are straying increasingly from streets and plazas in the "art-cages" of the museums; likewise, the colorful bustle of folk festivals, of carnivals and other parades, of religious processions, of theatrical performances in the open market place, etc., disappears. The life of the common people has for centuries been steadily withdrawing from public squares, and especially so in recent times. Owing to this, a substantial part of the erstwhile significance of squares has been lost, and it becomes quite understandable why the appreciation of beautiful plaza design has decreased so markedly among the broad mass of citizenry....

It is above all the enormous size to which our larger cities are growing that has shattered the framework of traditional artistic forms at every point. the larger the city, the bigger and wider the plazas and streets become, and the higher and bulkier are all structures, until their dimensions, what with their numerous floors and interminable rows of windows, can hardly be organized any more in an artistically effective manner.
Everything tends toward the immense, and the constant repetition of identical motifs is enough to dull our senses to such an extent that only the most powerful effects can still make any impression. As this cannot be altered, the city planner must, like the architect, invent a scale appropriate for the modern city of millions.... Everywhere, as if spontaneously, lots are divided up and streets are broken through so that even in the old parts of town more and more side streets result, and something of the obnoxious building-block system surreptitiously takes over....

It would, moreover, be quite short-signed not to recognize the extraordinary achievements of modern city planning in contrast to that of old in the field of hygiene. In this our modern engineers, so much maligned because of their artistic blunders, have literally performed miracles and have rendered everlasting service to mankind. It is largely due to their work that the sanitary conditions of European cities have improved so remarkably—as is apparent from mortality figures which have in many cases been halved.... This we gladly grant, but there still remains the question as to whether it is really necessary to purchase their advantages at the tremendous price of abandoning all artistic beauty in the layout of cities.

The innate conflict between the picturesque and the practical cannot be eliminated merely by talking about it; it will always be present as something intrinsic to the very nature of things. This inner struggle between the two opposing demands is not, however characteristic of town planning alone; it is present in all the arts, even in those apparently the freest, if only as a conflict between their ideal goals and the limiting conditions of the material in which the work of art is supposed to take shape....

In the field of city planning the limitations on artistry of arrangement have, to be sure, narrowed greatly in our day. Today such a masterpiece of city planning as the Acropolis of Athens is simply unthinkable. That sort of thing is for us, at the moment, an impossibility. Even if the millions were provided that such a project would entail, we would still be unable to create something of the kind, because we lack both the artistic basis for it and any universally valid philosophy of life that has sufficient vigor in the soul of the people to find physical expression in the work. Yet even if the commission be devoid of content and merely decorative—as is the case with art today—it would be frightfully difficult for our realistic man of the nineteenth century. Today's city builder must, before all, acquire the noble virtue of an utmost humility, and, what is remarkable in this case, less for economic considerations than for really basic reasons.

Assuming that in any new development the cityscape must be made as splendid and pictorial as possible, if only decoratively in order to glorify the locality—such a purpose cannot be accomplished with the ruler or with our geometrically-straight street lines. In order to produce the effects of the old masters, their colors as well must form part of our palette. Sundry curves, twisted streets and irregularities would have to be included artificially in the plan; an affected artlessness, a purposeful unintentionalness. But can the accidents of history over the course of centuries be invented and constructed ex novo in the plan? Could one, then, truly and sincerely enjoy such a fabricated ingenueneusness, such a studied naturalness? Certainly not the satisfaction of a spontaneous gaiety is
denied to any cultural level in which building does not proceed at apparent random from day to day, but instead constructs its plans intellectually on the drawing board. This whole course of events, moreover, cannot be reversed, and consequently a large portion of the picturesque beauties we have mentioned will probably be irretrievably lost to use in contemporary planning. Modern living as well as modern building techniques no longer permit the faithful imitation of old townscapes, a fact which we cannot overlook without falling prey to barren fantasies. The exemplary creations of the old masters must remain alive with us in some other way than through slavish copying; only if we can determine in what the essentials of these creations consist, and if we can apply these meaningfully to modern conditions, will it be possible to harvest a new and flourishing crop from the apparently sterile soil.

An attempt should be made regardless of obstacles. Even if numerous pictorial beauties must be renounced and extensive consideration be given to the requirements of modern construction, hygiene, and transportation, this should not discourage us to the extent that we simply abandon artistic solutions and settle for purely technical ones, as in the building of a highway or the construction of a machine. the forever edifying impress of artistic perfection cannot be dispensed with in our busy everyday life. One must keep in mind that city planning in particular must allow full and complete participation to art, because it is this type of artistic endeavour, above all, that affects formatively every day and every hour the great mass of the population, whereas the theater and concerts are available only to the wealthier classes. Administrators of public works in cities should turn their attention to this matter.