

# Creation and evolution of the Open Space in the sub center high raise zone of *Nishi Shinjuku*

By

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**Summary :** In the early 1960's a new concept in Japanese urban planning appeared, the *fukutoshin* (sub center). This concept aimed to change the single centered structure of the city that was located in the *Marunouchi* area. Due to this three sub-centers were proposed ; *Ikebukuro*, *Shibuya* and *Shinjuku*.

The intention of this paper is to understand the conception and composition of the public open space in *Nishi Shinjuku*, and its final results. To achieve this understanding an analysis from a historical point of view of the creation and evolution of the *fukutoshin* in West *Shinjuku* is conducted as well as a study of the environmental particularities of the urban traffic network changing process, which is associated with the development of the area.

The main idea of the structure for the plan of the *fukutoshin* was focused on creating an economical and administrative capital for *Tokyo*, Japan and Asia, based on the total restructure of the *Nishi Shinjuku* area. One of the key points of the plan was the separation between cars and pedestrians as well as the increase of the percentage of open space in the area, with the intention of expanding the access of such areas to the general population. For this reason it is important to understand the function and plan of the different open spaces of each block, which were created surrounding the construction of the buildings. This was possible under the process of transference of volume in a way to allow, in exchange for the extension in the height limits of the buildings, a higher percentage of open space areas in each block. Besides the advance planning of the general project, this study finds that the original proposal of the plan for the management of the *fukutoshin* was not totally fulfilled in its conception of the open spaces, since there exists a considerable variation between the percentage ratios of the open space areas at each one of the eleven central blocks as well as an absence of agreement in the design and the network connection of the areas. Through a detailed analysis of the area and the contraposition of the data, it is possible to achieve an understanding of the reasons that influenced in obtaining that result.

**Key Words :** *Nishi Shinjuku*, *fukutoshin*, *restructure*, *open space*, *high-raise zone*

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## 1. Introduction

The *fukutoshin* or sub-center implementation plan is the creation of a new sub center in the city since the only center, or *toshin*, is the area of the Imperial Palace, which appears to be the central organizing element of the urban form<sup>1)</sup>. Indeed it is positioned in the geographical middle of the city as a heart from where the

city spread outwards. A cognitive analysis shows that actually there doesn't exist only one center but many sub centers linked by the transportation network.

This area doesn't perform in the reality ; neither does it have a strong character as a center, or magnet node, as *Shinjuku* does now. On the other hand the area of *Nishi Shinjuku* plays a role as an imposed center by magnitude and activity (Business, Information and

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**Table 1** SKK (*Shinjuku Shintoshin Kaihatsu Keikaku*)  
primary objectives for the building constructions and maintenance

Objective in the area	Shinjuku sub center district. About 96ha (Shinjuku-ku Southwest)
Main target of redevelopment development of the district	The location of the business function is advanced while making the best use of existing commercial accumulation, the redevelopment around the station etc. and the introduction of the train lines according to commuting are promoted, and the reinforcement is aimed at the sub center.
Usage, density, and outline planning for other land use	The high rise building street area makes the main axis, and it becomes a highly developed district for business. An overall organic land use with the character aimed at the whole by which the street, the parking lot, and the park are combined.
Policy for the renewal of buildings	The supply for the city type house is promoted assuming the construction of business facilities to be a subject, as a rule, and also the usage of the buildings for the town where harmony can be achieved.
Urban facility and policy of maintenance of district facilities (Transport)	The widening of the ramp of the Highway No. 4 is promoted and also the installation and promotion for the construction of the Toei subway line No. 12. Moreover, the deck for pedestrian only is set up at the Nishiguchi area.
Public, private role etc.	Public is the key for public utilities. Other public utilities maintained by the union enforcement, the urban area redevelopment project and the development act, etc.
The construction execution schedule within 5 years (roughly)	Urban area redevelopment project. Excellent building redevelopment maintenance and construction promotion. Wooden rental house and district business synthesis maintenance.
City planning decision or change within 5 years (roughly)	Highly developed use district Specific block

Government<sup>2)</sup>) as well as through the train network, the scale and the volume of people that commute, work and visit the area daily<sup>3)</sup>.

The study of the high-rise proposals in the area and the constructions of the buildings that frame the entire space is of vital importance. The SFK (*Shinjuku Fukutoshin Kensetsu*), from 1960 to 1968 was the result. It was the coordinator of the allotting activities in the area, and then from 1969 the SKK (*Shinjuku Shintoshin Kaihatsu Keikaku*) was the regulator of the establishing the conditions for the constructions and the maintenance as well as the construction of the different open spaces.

In the beginning rail networks were not included inside the works of the *fukutoshin*, but each of the railroad companies was responsible for the works of improvement of facilities and the installations of the trains. The different railway companies were also responsible for the creation of the *Shinjuku Union Station* and they had the responsibility of moving the different lines to that terminal. The outcome of this work was that *Shinjuku Union Station* became an important node of communication to and from the west of *Tokyo*, an addition that agreed with the works of the plan of the *fukutoshin*.

To complete the works The Public Corporation for Highways and Roads of the capital was responsible for the extension of *Ome Kaido* and *Koshu Kaido* avenues as well as the ramp of Highway No. 4 (See Table 1), which would complete the urban traffic network linking the *fukutoshin* of *Nishi Shinjuku* with the rest of the city.

## 2. The structural guidelines for the building construction

From 1965 to 1969 the blocks where the *Yodobashi* Water reservoir was, the actual eleven central blocks area where the main concentration of business building where expected to be built, were put on sale ; but this sale didn't result in the immediate beginning of the constructions. From the second half of 1960 until 1970 there was a process of recovery of the economy<sup>4)</sup>.

In 1969 the SKK, as a union of the different companies that purchased the lots, imposed a timetable for the constructions and a basic guidelines for the work and use of the buildings (See Table 1).

In April of 1971, the construction agreement as well as the guideline and rules for a concrete construction plan were laid down.

The main points of the construction agreement were :

1. From the point of view of stopping the pollution of the atmosphere, employment of air conditioning system, and central heating as source of heat.
2. Separation of the pedestrian paths and the streets.
3. Planning of the organic combination among the spaces and among each one of the blocks.
4. Improvement of the public transport.
5. Limiting of the height of the buildings to 250 meters above the ground.

In an effort to improve the open space capacity, the SKK imposed policies for the regulation of buildings that were constructed in single lots allowing the

remaining space to be kept for open areas or as passages for public use, and also the streets were widened. The allowed policies extended the limit for the height of the buildings but were limited by different dispositions.

The extension of constructed area for buildings is limited in height by the limitation of the oblique disposition from the opposite side to the adjacent streets of the blocks and to the north side for the regulation of the percentage of shadow and daily light to the adjacent residential neighborhoods.

Indeed the construction of the buildings was liberated making an exception to the original plan, but still in accordance with the scheme of regulations. Therefore, the limits of capacity and height are in accordance with the percent of capacity of use of the floor in relation to the surface, and considering the improvement of the environmental conditions in relation to all that is created in a certain area.

The regulation on the extension of the limits of the height of the buildings was based on certain parameters, according to the regulation standards of the constructions; for example in the case of the business and commercial area, the limitation of the height of the building in the case of the building façades facing inwards to the business area, would be marked by a ground slash inclination of 1 to 2.5, taking as a starting point the boundary line of the neighbor site from the height line of 31 meters in direction to the top of the building.

In the case of the façade facing towards the road, the height limit would be imposed by a road slash inclination of 1 to 1.5 taking as a starting point the opposite side, limit of the street.

For the commercial and business area the limit of height also could be expanded due to the implementation of a Plan Unit Development system (P.U.D.), which is an exception to the traditional urban planning, a change in the standard regulations for the constructions.

Nevertheless, in the case of the central eleven blocks (See Fig. 2), there was an objective to maintain a solid unity in the width of the streets that surrounded the area of the *fukutoshin*. In accordance with this objective, the area of the buildings would have some special conditions. Here, the conception of the special blocks, the ones that had been implemented for the first time in the development concept of the *fukutoshin* of *Nishi Shinjuku*, must be mentioned. This concept is the concretion of an area of single allotted blocks (the eleven central blocks) with special particularities, each one of which is composed of different areas: surround-

ing pedestrian area and the total construction area. The total construction area is composed of the total building area and the open space area or patio. The external public pedestrian circulation area is connected by several accesses to the semi public open space as a transition between the public outside area and the private building area, improving the functionality of this special block, mostly by placing single centered constructions in each block. The project also is the conception of a grid of wide streets and blocks having mostly similar size and shape in the total area from the block 1 to 9.

### 3. Increase of the open space area through the allowance of volume transference

The first building built on the *fukutoshin* in November of 1968 was the *Keio Plaza Hotel*. Following the construction of the *Keio Plaza Hotel*, other companies imitating Keio started an intense building process.

In the following scheme we can appreciate the developing of the buildings, as well the capacity in square meter and personnel that would work and visit the area. (See Table 2)

As can be appreciated, the volume of the constructions and the capacity is huge. In a very short time, 40 years, the amount of people that work and visit the area increased monumentally, changing the scale of the *Nishi Shinjuku* area from an unpopulated and undeveloped area to a modern complex city. The amount of space liberated for use as public open spaces increased, compared with the rest of *Tokyo*, from 6% to 17%, which includes the *Shinjuku Central Park (Chuo Koen)* (See Fig. 1). The project allowed an emerging increase for greenery, as well as an adequate use of parks. It can be said that the plans succeeded taking into consideration the amount of percentage dedicated for such purposes. And if we consider that the percentage ratio of the area dedicated for building constructions in the *fukutoshin* was 33% of the total area, against 76% which is the average dedicated for building constructions in the rest of *Tokyo*, we can conclude that not only the percentage for open space areas and greenery increased, but also the general percentage in the construction area ratio contrasted to the open space areas ratio also increased favorably.

In connection with the idea of providing a “bonus” in the percent of capacity, the change in the creation of new public open spaces, the interconnection of the spaces, as well as their use has become a problem, since there is a weak communication among them. An additional problem was the communication between the new public and private open spaces. On the other

**Table 2** building developments and data

(\* For reference of the building location see Fig. 2)

Building Name	Building Started	Open to Public	Height in Meters	Floors Upper ground	Under-ground Floors	Site area in m <sup>2</sup>	Open space area in m <sup>2</sup>	Built area in m <sup>2</sup>	Total floor area in m <sup>2</sup>	Parking places	Main Use	Workers	Visitor per day	Map Ref. No.	Period
Keio Plaza Hotel 1	1969, 5	1971, 6	170	47	3	14,500	1,409	8,486	116,237	266	Hotel	2,273	2,236	1	Showa Period 1926 to 1989
Keio Plaza Hotel 2	1978, 3	1980, 11	132	35	3			4,605	58,192	243				10	
Shinjuku Sumitomo Building (Sankaku Biru)	1971, 11	1974, 4	210	52	4	14,446	6,077	8,369	177,467	517	Branch office	8,560	30,000	2	
KDD Building	1971, 7	1974, 7	165	32	3	10,621	7,660	2,961	123,803	269	Offices	3,404	400	3	
Mitsui Building	1972, 3	1974, 10	225	55	3	14,449	4,858	9,591	179,671	515	Branch office	9,446	25,000	4	
Yasuda Kaisai Kaijo Building	1972, 12	1976, 5	200	43	6	9,298	4,955	4,343	124,438	406	Offices	2,191	300	5	
Shinjuku Nomura Building	1973, 11	1978, 6	210	50	5	9,298	7,320	1,978	119,085	330	Branch office	6,000	15,000	6	
Shinjuku Center Building	1973, 11	1979, 11	223	54	4	14,920	11,254	3,666	183,063	540	Branch office	9,600	30,000	7	
Shinjuku Dai Ichi-Seimei Building	1978, 8	1980, 8	120	26	4	14,344	1,930	12,414	91,094	505	Branch office	4,144	5,000	8	
Odakyu Century Hyatt	S 1980, 9	1983, 3	120	28	4				85,150		Hotel	1,700	7,000	9	
Shinjuku NS Building	1979, 11	1984, 9	134	30	3	14,053	3,028	11,025	166,864	487	Branch office	8,544	20,000	11	
Shinjuku Kokusai Building	1980, 10	1984, 9	123	38	4	11,700	4,122	7,578	125,513	367	Hotel, branch office	1,540	2,000	12	
Shinjuku Washington Hotel	1980, 6 1983, 8	1986, 2	97	25	4	11,066	5,556	5,510	101,928	297	Hotel, branch office	300	4,000	13	
Green Tower	1981, 1	1986, 3	110	29	4	6,912	3,134	3,778	55,372	154	Office, housing, temple for ceremonies	2,100	2000	14	
Tokyo Medical College Hospital	-	1986, 4	84	19	2	23,293	13,240	10,053	97,620	204	Offices	2,000	200	15	
Shinjuku L Tower	1981, 1	1989, 4	121	31	5	7,260	1,885	5,375	94,000	264	Branch office	2,700	15,000	16	
Shinjuku Monolith	1987, 11	1990, 2	121	31	5	7,167	1,792	5,375	94,000	264	Branch office	2,700	15,000	17	Heisei Period 1989-
TMG (Tocho) 1	1987, 11	1991, 3	243	48	3	14,350	3,150	11,200	191,000	520	Municipal office	6,800	20,000	18	
TMG (Tocho) 2	1987, 11	1991, 3	163	34	3	14,043	4,243	9,800	138,000	440		6,200		19	
Kogakuin University 1	1986, 1	1992, 8	150	29	6	8,881	4,383	4,498	114,648	318	University and branch office	6,000	1,000	20	
Kogakuin University 2	1986, 1	1992, 8	140	29	6							3,000	8,500	21	
Shinjuku Park Tower	1990, 5	1991, 1	235	52	5	26,538	13,199	13,339	301,153	827	Office, hotel, show room	10,460	25,000	22	
Shinjuku Square Tower	1989, 6	1994, 10	128	31	4	8,700	4,350	4,350	82,136	350	Branch office, housing complex	3,800	9,500	23	
I Town	1989, 6	1994, 10	82	22	4									24	
I Land Tower	1989, 3	1995, 2	190	44	4	22,238	11,028	11,210	174,781	750	Branch office	8,500		25	
Nishi Shinjuku Mitsui Building 1	1992, 3	1999, 12	130	27	2	10,000	4,970	5,030	86,170	280	Branch office, housing complex	3,200	8,000	26	
Nishi Shinjuku Mitsui Building 2	1990, 3	1999, 12	90	21	2									27	
Business Building 1	1974, 3 1992, 12	-	173	36	3	14,820	7,182	7,638	162,957	460	Office, commercial chamber	8,000	24,000	28	
Business Building 2	1974, 3 1992, 12	-	101	20	3									29	

hand, spaces for pedestrians, along the streets their use on the contrary was efficient showing good results.

In the case of very high buildings, the winds generated by the constructions could be negative, and under these conditions it became imperative to make good use of the interior public spaces. A proposal for these interior public spaces was made in the planning for the blocks 6 and 7 of the *Shinjuku fukutoshin*, by which the use of space related to this area become systematically ordered. The blocks 1 to 9 were practically a unity connected above ground by passages, increasing the pedestrian free circulation from the station up to the high-rise buildings zone and on the *Shinjuku Chuo Koen* at the back through bridges, reaching a systematized form in the good use of these varied

spaces, with a diversity of styles. Next to the fact that the interior spaces were included or connected to the public spaces, the included greenery and the benches completed the urban furniture, giving a common sense to the whole<sup>5)</sup>.

#### 4. The expanding transport network in relation to the *fukutoshin* plan

The plan of urban redevelopment of the *fukutoshin* was not only important for *Shinjuku* but also for the urban planning of *Tokyo*. The project had to deal with the huge mass of people who would commute daily to this area for work purposes or pleasure. In addition this, careful planning is closely related with the improvement of the urban traffic network of roads and trains.



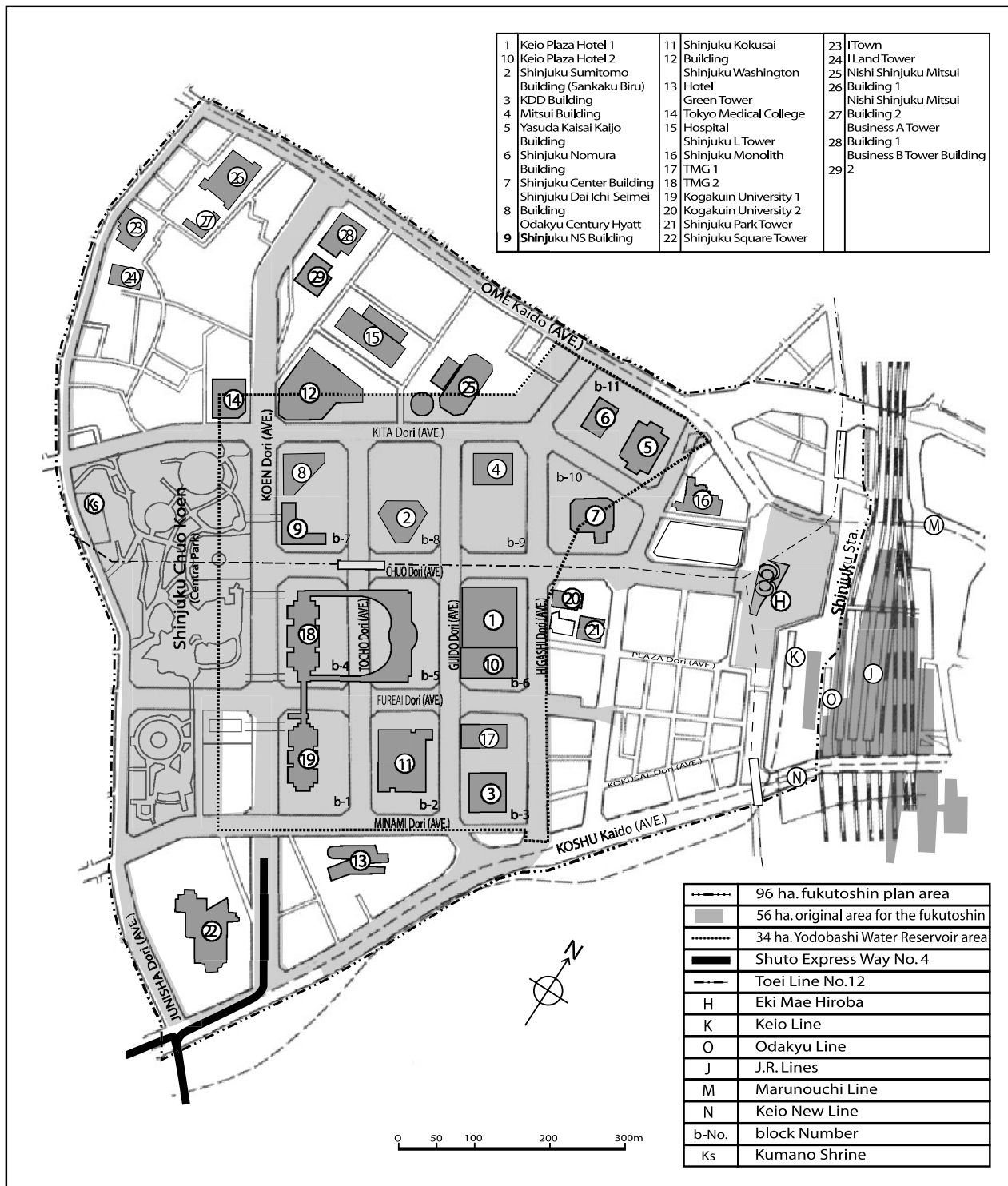


Fig. 1 Nishi Shinjuku fukutoshin development area

(\*for reference to the building construction data see Table 2)

The main key was the *Shinjuku Union Station* project as it was implicated by the connection of new lines and the improvement of services. Between 1931 and 1932, the end of the route of the *Keio* train line was moved toward the west side of *Shinjuku Station* of the *Odakyu* terminal. In 1964 the *Shinjuku JR Station* was completed. In 1974 *Keio-Sagamihara* line and also *Odakyu-*

*Tama* line extended to *Shinjuku*. In addition, in 1980 the *Shinjuku-Iwamotocho Toei subway's Shinjuku line* opened and in 1986 *Saikyo* line opened. All of these improvements linked *Shinjuku* to the west as well as to the east, making rapid progress in connecting the *fukutoshin* to the entire city train network<sup>6)</sup>. The gradually increasing number of people who commute at

*Shinjuku* can be appreciated since the *fukutoshin* plan started and *Shinjuku* was becoming the central node. There exists a close interaction between the increase of train services and commuters and the development of the *fukutoshin* since the early beginning of the building constructions ; this phenomenon can be appreciated as is shown in Fig. 2.

It was expected that an average of 110 thousand people would come in to work at *Nishi Shinjuku* every-day, along with between 27–28 thousand visitors a day, which shows the importance of the project for the society<sup>7)</sup>.

An important improvement for this project was the creation of the *Toei Shinjuku* line No. 12 of subway that runs underground of the *fukutoshin* (See Fig. 1) opened in 1985. This was a direct way to link the *Shinjuku Station* to the project area as a way of transport for workers and visitors, and more recently the subway line of *Oedo* is connected to the *fukutoshin* at the *Tocho Mae Station* that runs from *Shinjuku*<sup>8)</sup>.

As we can see in Fig. 2 the impulse of the project compels an incredible amount of commuters daily, on the other hand the imposed structure of the project makes necessary the creation of new lines, which can be reflected in a kind of auto propulsion. After each major step in the evolution of the *fukutoshin* project a new train line was created.

## 5. Open space composition at the eleven central blocks

To arrive at a better understanding of the spatiality of the open spaces of *Nishi Shinjuku*, an exhaustive analysis was carried out, focusing on the eleven central blocks of the *fukutoshin*.

By analyzing the composition of the total area of each block, and considering the separation of the areas dedicated for general construction, pedestrian, the building construction and the total open space area. Analyzing the percentage ratio of open space in each block of the central area, it could be understood that a considerable variation exists in the percentage rate dedicated for that purpose.

As a result of this process, the reason of that discrepancy between the ways that each block is planned can be understood.

There is no common sense in the way of distributing the areas designated for each construction purpose. The variations are not in relation to the differences in the volume in ha of each block, since if we look at the ratio (%) of the volume dedicated for open space in each block, it differs from 39.4% at the lowest to 78.3% at the highest, giving a difference of 38.9% between the

extremes, with a media average ratio for open space area at 60.1%. (Fig. 3)

To find the reasons that allow understanding of the key to this variant it is necessary to go beyond by analyzing other factors.

As can be appreciated in Fig. 4, is possible to understand the differences of the areas ratio dedicated for open spaces. The average ratio for open space areas is organized in a graph according to the year of the construction of the buildings.

It is clear that in the case of the *Keio Hotel*, being the first edifice in the area of the central eleven blocks of the *fukutoshin*, the measures for the construction of the open space taken at the time were unevaluated. The next constructions did not follow the first case and progressively increased the amount ratio of open space, but again the lowest ratio is represented at that time by the *Odakyu Century Hyatt* as could be seen before. But these graphs, after showing an increase, suddenly decrease coinciding also with a period of economic inflation in Japan, and followed by an economic revival. Private interests could not afford construction under the high rates dedicated to open space, which are economically unproductive. Following that decay, there started a slow increase, mostly represented in the case of public buildings such as the TMG buildings complex, after which started to decrease again after a slowing process of the economy. It's important here to keep in mind there exists a difference between public and private constructions as could be seen later on. This is shown clearly in the increase of open spaces ratio, represented exclusively in the case of public buildings, and particularly those buildings of the TMG that were a self-monument to the central *Tokyo Metropolitan Government*, which carried out an extended campaign to move the offices to the actual location without measuring the cost of the economic recession. This can be appreciated also in the study of the composition of the percentage distribution of the total open space area of each block (Fig. 5), taking into account the distribution of different elements that compose the open space, analyzed through the total average ratio (%) of the open space area for each block, by year of construction. These are : total pedestrian area ratio, total internal walk path and patios area ratio, total greenery area ratio, total stairs area ratio, total car access and parking area ratio and total water ponds area ratio.

It can be said that both of the hotels (blocks 6 & 7) have a considerable high ratio in parking areas at surface level under the concept of permanent clients and the same ratio (%) dedicated to internal patio or

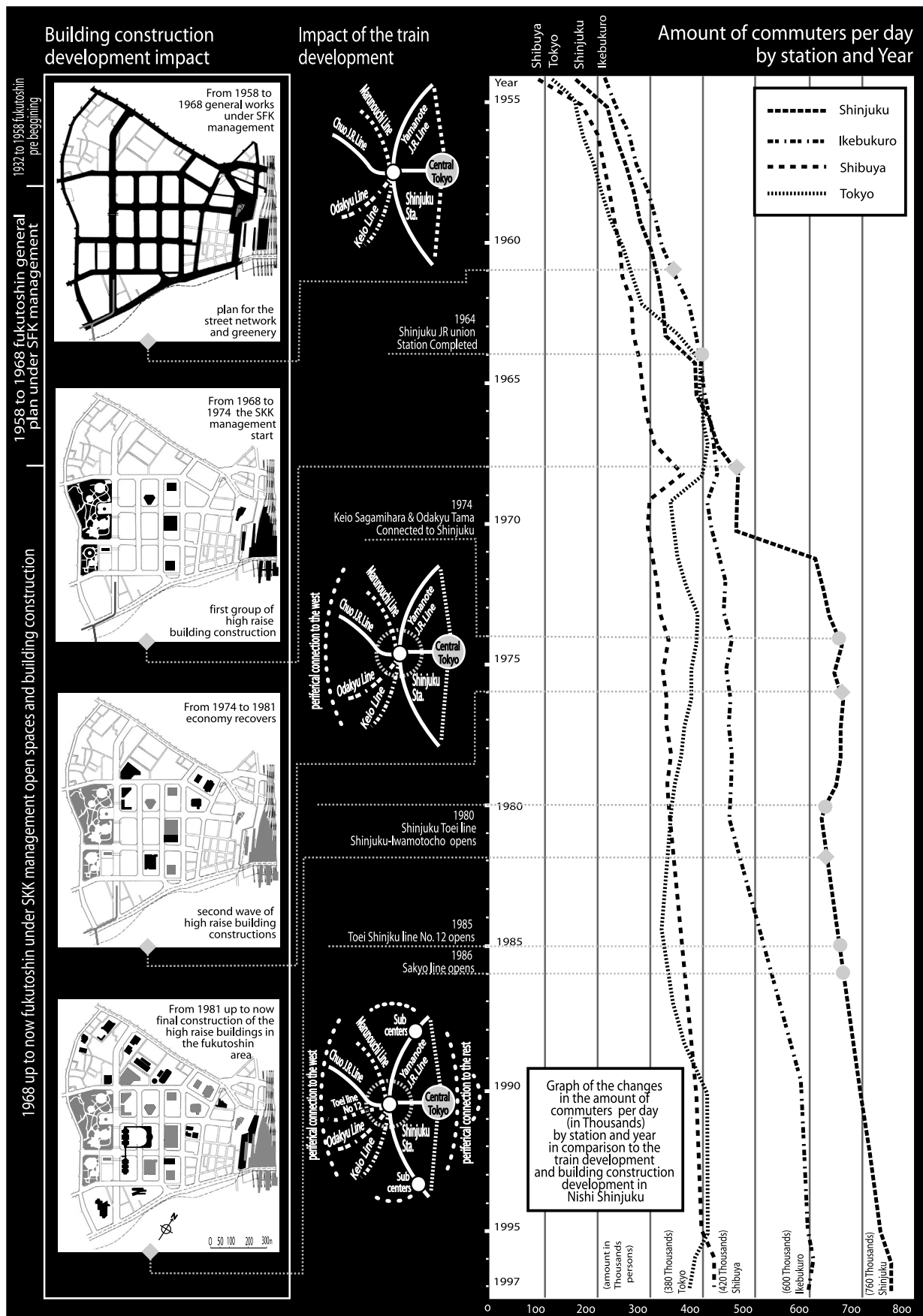
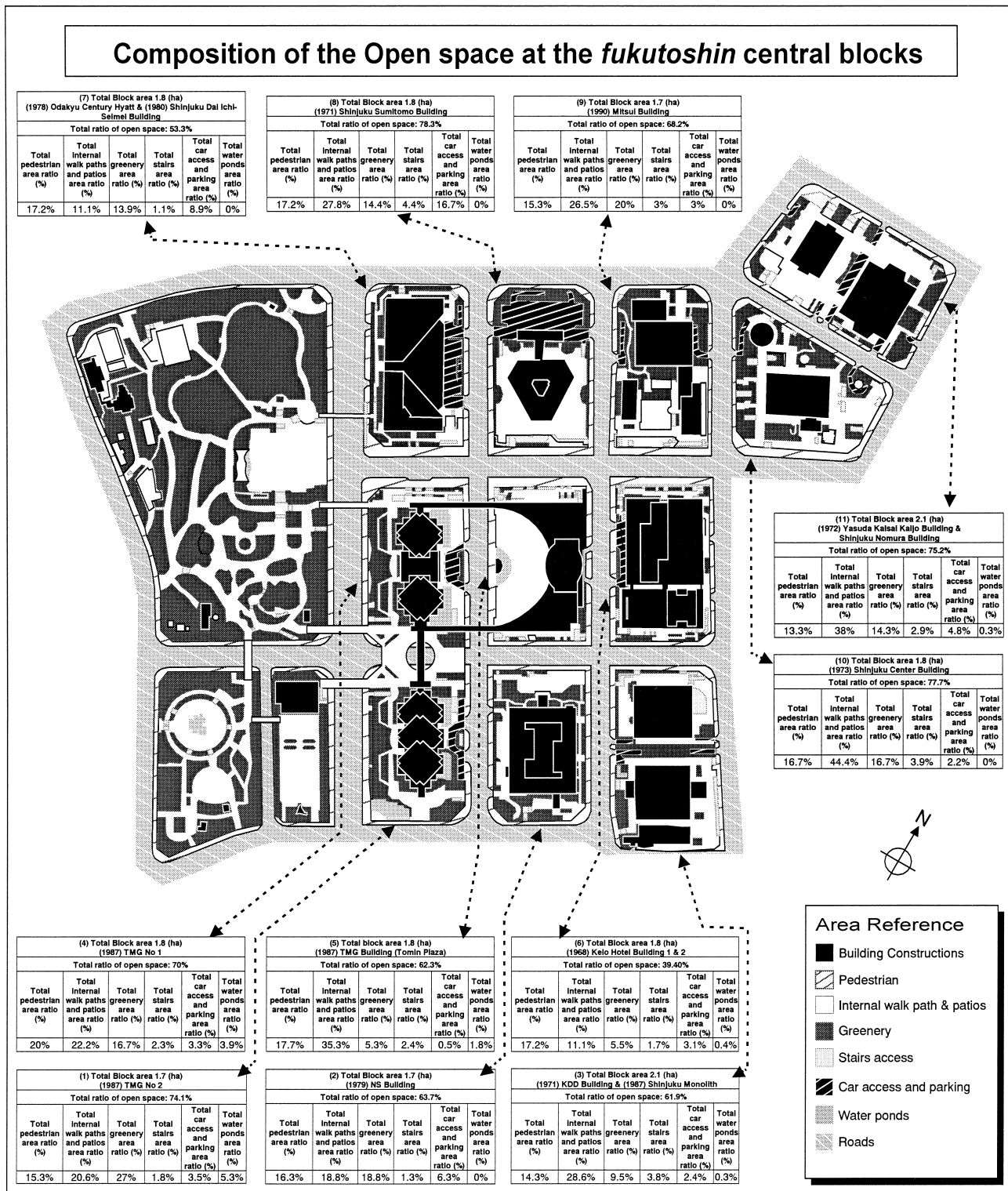


Fig. 2 Graphic of the related causes for the increase of commuters at Shinjuku



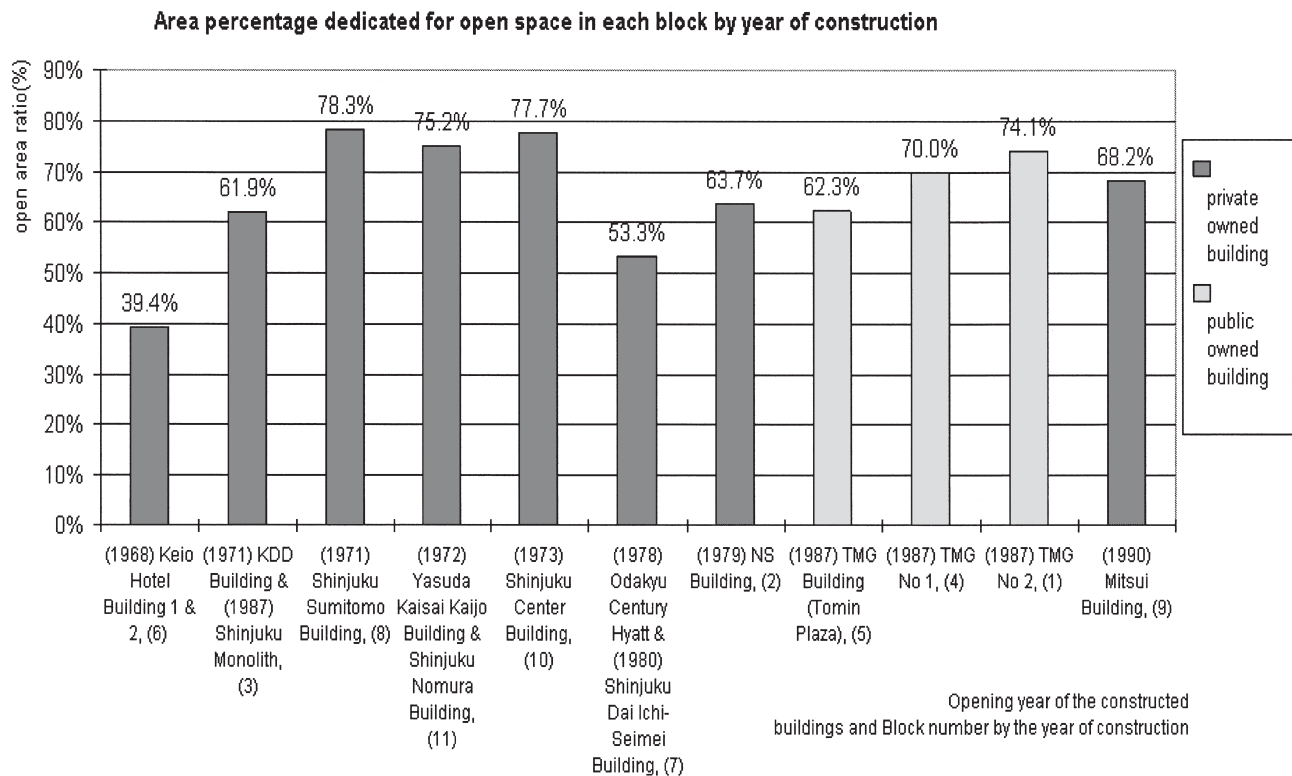
Fig. 3 Composition of the Open space at the *fukutoshin* central blocks

walk path, the other one is *Sumitomo* building, but in exchange has a better standard for the internal patio area, which is one of the most accessible areas for the general public, with an easy free circulation all around.

Detach that the Public buildings are the only ones that enjoy a high standard for open space, all of them having water ponds, which are inexistent or hardly

present in other cases. The most accessible areas for the general public are the internal patios, which also follow the pattern of the economy, increasing and decreasing almost as did the total area ratio for open spaces. And again, the leading construction of public buildings represents the increase after the decrease represented in the graph in 1978.





Opening year of the constructed buildings and Block number	Open space ratio of the block (%)	Public Private Building
(1968) Keio Hotel Building 1 & 2, (6)	39.4%	Private
(1971) KDD Building & (1987) Shinjuku Monolith, (3)	61.9%	Private
(1971) Shinjuku Sumitomo Building, (8)	78.3%	Private
(1972) Yasuda Kaisai Kaijo Building & Shinjuku Nomura Building, (11)	75.2%	Private
(1973) Shinjuku Center Building, (10)	77.7%	Private
(1978) Odakyu Century Hyatt & (1980) Shinjuku Dai Ichi-Seimei Building, (7)	53.3%	Private
(1979) NS Building, (2)	63.7%	Private
(1987) TMG Building (Tomin Plaza), (5)	62.3%	Public
(1987) TMG No 1, (4)	70.0%	Public
(1987) TMG No 2, (1)	74.1%	Public
(1990) Mitsui Building, (9)	68.2%	Private

Fig. 4 Table and Graph of the area percentage dedicated for open space in each block by year of construction

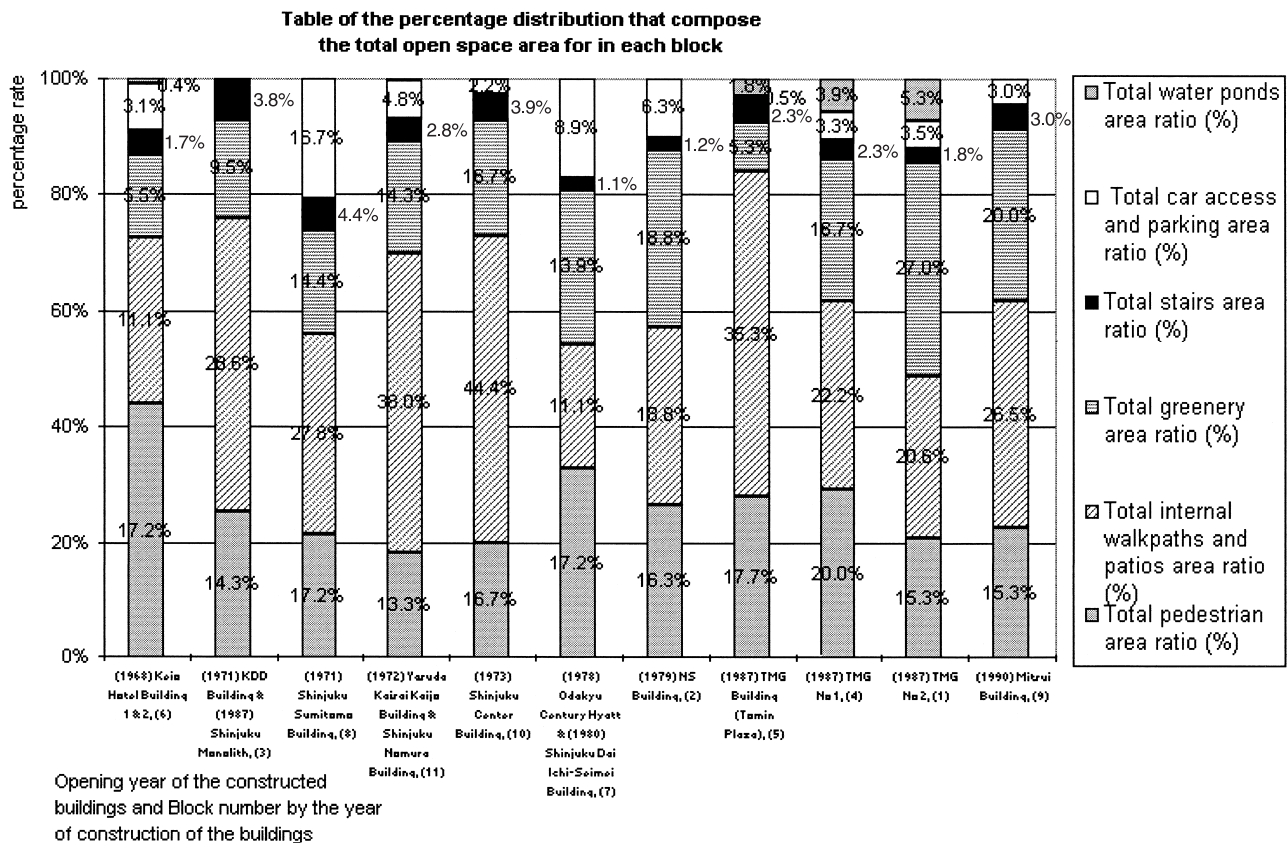
Up to here it can be understood that there does not exist a uniformity of the average ratio for open spaces at the central blocks, but this would be analyzed in contraposition to the average height of the building in floors, for each block by year of construction. (Fig. 6)

The height in floors for the building constructions correspond to an average of 38.8 floors but in a variation from 8 floors at the lowest case to a height of 55 floors. A construction with fewer floors could have had less open space according to the regulations; this was the main central idea of the *fukutoshin* plan of *Nishi* (West) *Shinjuku*. Building constructions could increase in height under the idea of benefiting the community, adding wider areas of open space, since the higher the

building is built the more the open space area percentage should be increased, and as a compensation because the percentage of shadow that they produce is also bigger.

Against this, the *Keio Plaza Hotel* (private) exceeds the media in negative proportions, giving not enough open space for its height, exceeding the norms. On the contrary the TMG building, *Tomin Plaza* (public), is far over the positive relations.

Finally to conclude, the results are contraposed in the case of Fig. 7, which represents the relation of average height of the buildings at the blocks in relation to the area ratio for each block dedicated to open space area. In this case the *Keio Plaza Hotel* Building is not

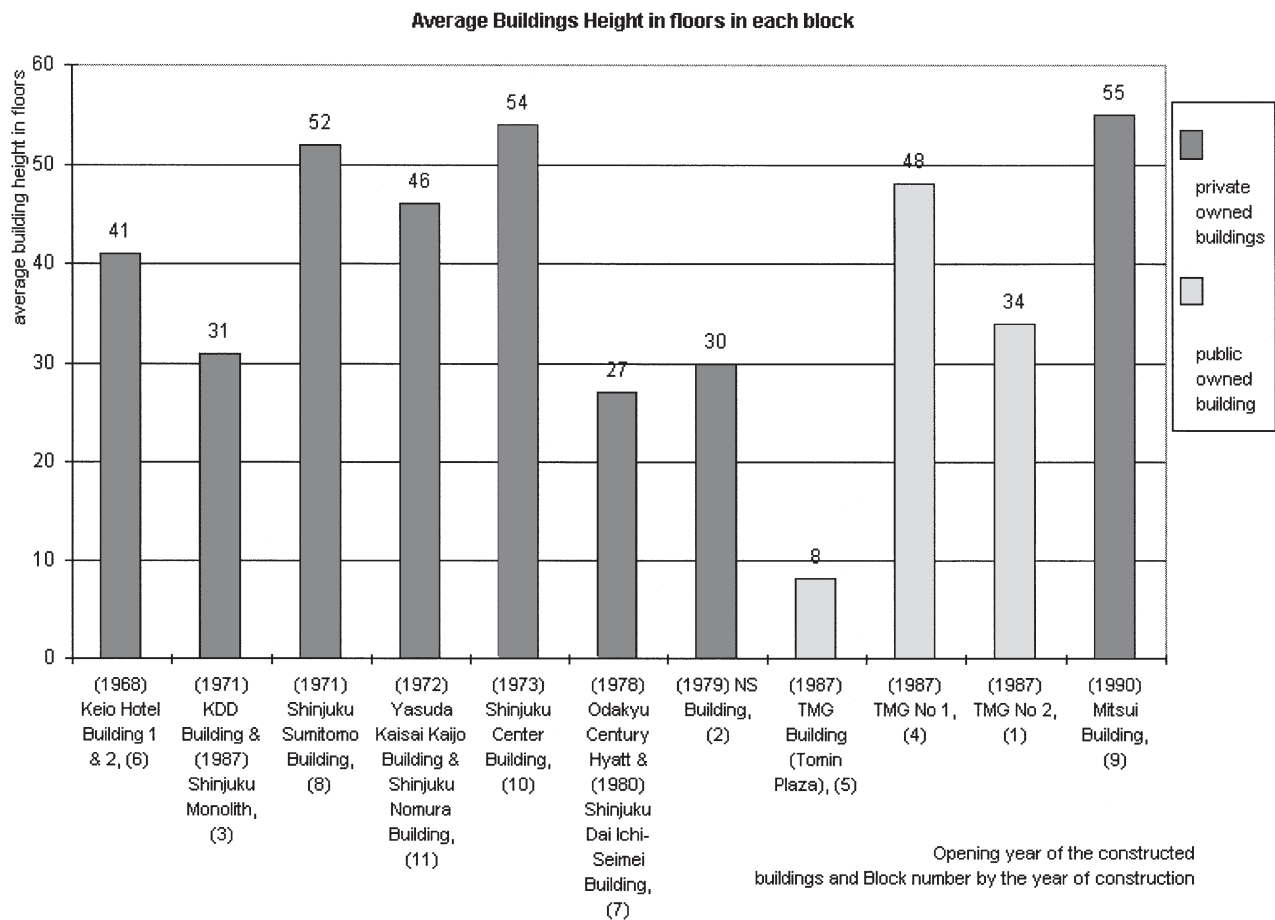


**Fig. 5** Table and Graph of the composition of the percentage distribution for the total open space area in each block

taken into consideration, nor the TMG building *Tomin Plaza*, having respectively in each case too bad, and too good values for the open space average. With these exceptions, the graph shows that there exists a general agreement to the original plan. Taking the media of the total average height of the buildings and the total media of the open space ratio of the blocks, the result concludes that an average media relation represents,

for each floor constructed, an average ratio of 1.65% of the total area of the block dedicated to the increase of the open space area.

In this way the resulting factors that are influential in the planning in terms of the average percentage ratio for the diverse open space areas of the blocks were : the height in floors of the buildings and the period of the construction (economy), Private or Public



Opening year of the constructed buildings and Block number	Average Buildings Height in floors	Public Private Building
(1968) Keio Hotel Building 1 & 2, (6)	41	Private
(1971) KDD Building & (1987) Shinjuku Monolith, (3)	31	Private
(1971) Shinjuku Sumitomo Building, (8)	52	Private
(1972) Yasuda Kaisai Kaijo Building & Shinjuku Nomura Building, (11)	46	Private
(1973) Shinjuku Center Building, (10)	54	Private
(1978) Odakyu Century Hyatt & (1980) Shinjuku Dai Ichi-Seimei Building, (7)	27	Private
(1979) NS Building, (2)	30	Private
(1987) TMG Building (Tomin Plaza), (5)	8	Public
(1987) TMG No 1, (4)	48	Public
(1987) TMG No 2, (1)	34	Public
(1990) Mitsui Building, (9)	55	Private

**Fig. 6** Table and Grapc of the averages in floors of the buildings at the blocks by the year of construction

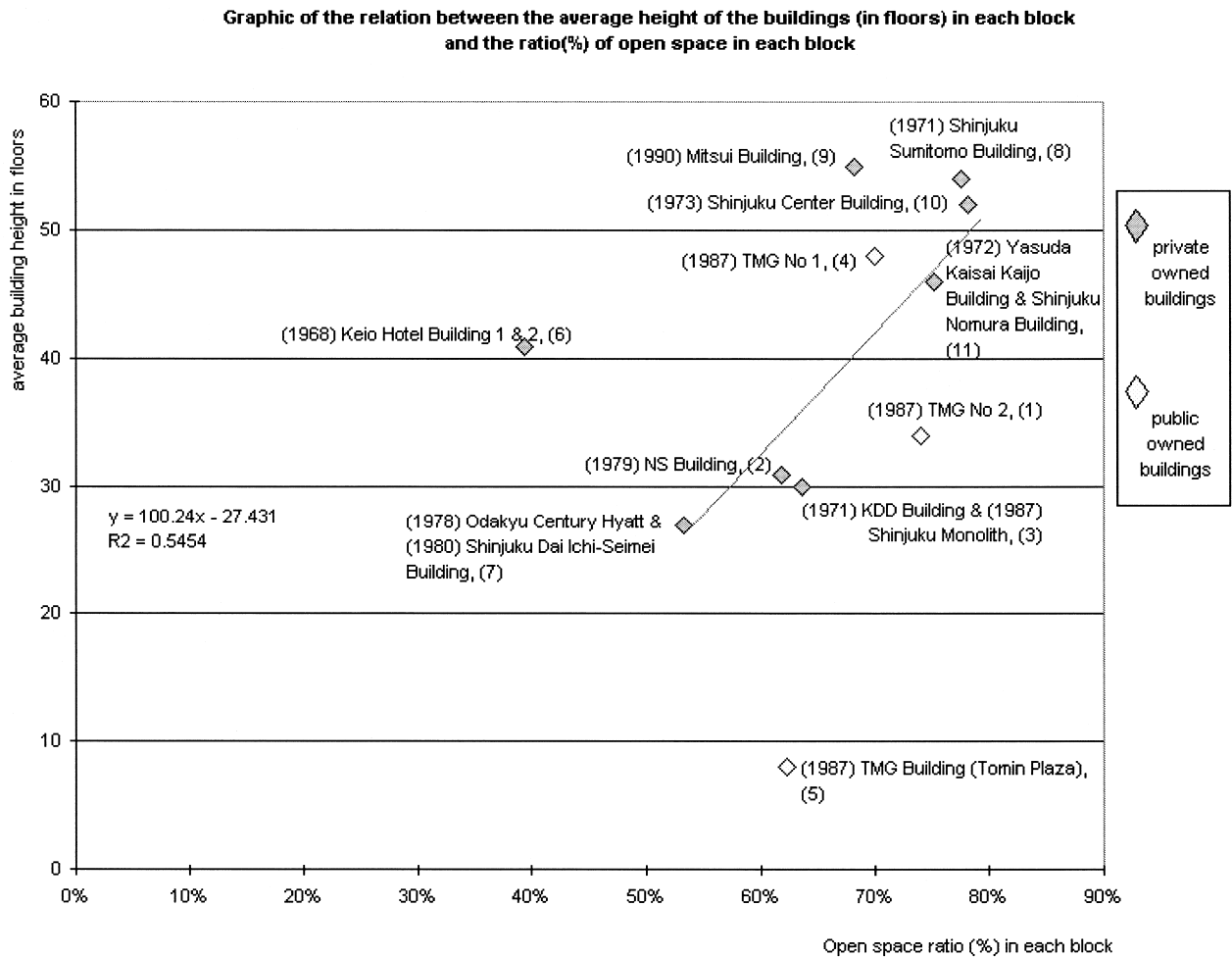
constructions.

Construction flourished during the economic boom, decaying in the late 1970's and early 1980's and being represented in increased projection only by the public construction sector after that period. This shows that only public investment could afford a higher rate (%) of areas dedicated to open spaces, and private investment, despite even getting higher in building floors construction, couldn't maintain the same standards. This means that the *fukutoshin* plan was based on the

projection of an established secured economy, and couldn't prevent a possible reaction in the market that would make it difficult to maintain the guidelines, that were secured in the outlines of the general management plan.

## 6. General observations

At the moment, the interest of the *fukutoshin* project lies mostly in the contrast which it provides with the patterns of development of *Shinjuku* in the past,



Opening year of the constructed buildings and Block number	Open space ratio of the block (%)	Average Buildings Height in floors	Public Private Building
(1968) Keio Hotel Building 1 & 2, (6)	39.4%	41	Private
(1971) KDD Building & (1987) Shinjuku Monolith, (3)	61.9%	31	Private
(1971) Shinjuku Sumitomo Building, (8)	78.3%	52	Private
(1972) Yasuda Kaisai Kaijo Building & Shinjuku Nomura Building, (11)	75.2%	46	Private
(1973) Shinjuku Center Building, (10)	77.7%	54	Private
(1978) Odakyu Century Hyatt & (1980) Shinjuku Dai Ichi-Seimei Building, (7)	53.3%	27	Private
(1979) NS Building, (2)	63.7%	30	Private
(1987) TMG Building (Tomin Plaza), (5)	62.3%	8	Public
(1987) TMG No 1, (4)	70.0%	48	Public
(1987) TMG No 2, (1)	74.1%	34	Public
(1990) Mitsui Building, (9)	68.2%	55	Private

Fig. 7 Table and Graph of the average height of the buildings at the block

In comparison with the open space rate at each block

isolated from the realities and complexity of *Shinjuku* and from an understanding of the dynamics of its historical development, such plans treated *Shinjuku* as little more than an instrument for advancing a master plan. The real question to be asked is why any such grand plans are totally efficient. The first anomaly of the *fukutoshin* is one of function: it was not a spontaneous response to the needs of the people generated by

the station, but rather an artificial technique of dispersing the heavy concentration of business facilities in the *Marunouchi* center.

This occurred basically because the disposition of the land for the *fukutoshin* was conducted within the context of the internal politics of the *Tokyo Metropolitan Government* with little or no direct participation of indigenous *Shinjuku* commercial or residential inter-



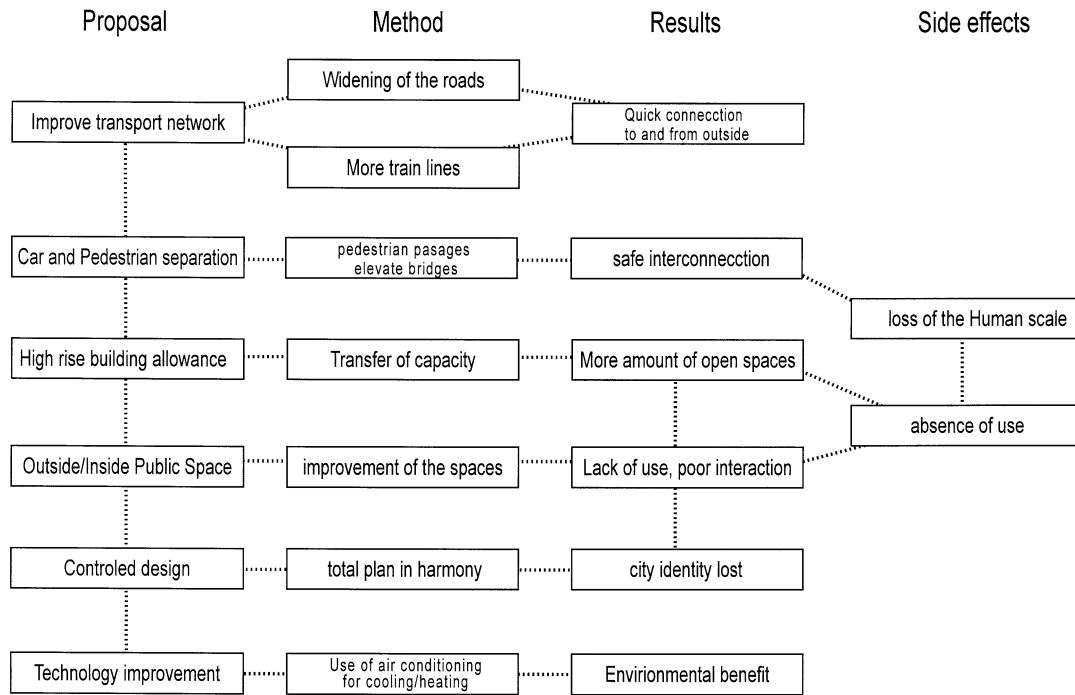


Fig. 8 Methodology of the plan and side effects

ests. In the first place, the area is too distant from the current station-commercial complex to be of interest to local developers.

The total functionality of the plan collides with the problem that the lots of land were too large to be purchased by local capital with the one exception of the private railroads (*Keio* and *Odakyu*). In a sense, the *fukutoshin* project was the victim of the financial plight of the city government, which could not afford to develop the land for public use nor even to wait and allow spontaneous private needs to emerge. Not surprisingly, the lots were purchased slowly and reluctantly. In order to sell such a large piece of land quickly and at high prices, it became necessary to develop a master design, both for the function and the physical planning.

The other problem is represented in a new concern for the lack of pedestrian convenience, such as the planning of pedestrian decks, which link at least some of the buildings. The result, closely resembles the idea of the “*City for Three Million*” of *Le Corbusier*, is a classic case of formal mid-20th century planning principles. Since the basic plan was made in the 1960’s when the automobile showed promise, it is a city made for automobiles rather than pedestrians that in the end failed, since today most people arrive at *Shinjuku* by public transport. The proportions are as follow : 85% arrive by train, 8% by bus, 4% by foot and the remaining 3% come by taxi or private car.

Neither is there a common pattern of the whole for

the design of the open spaces of the *fukutoshin*. The blocks No. 1, 4 and 5, which belong to the TMG complex, are integrated into the same design, while the rest of the blocks follow different concepts (not unified). The blocks 4, 5 and 6 are oriented to have important access to the pedestrian at the north side, as well as blocks 7, 8 and 9 do at the south side at *Chuo Ave*. This Avenue is the main corridor with straight access to *Shinjuku Station* and has the character of a symbolic Avenue. At the same time the relationship to the *Shinjuku Chuo Koen* (central park) is weak, mostly being connected to the rest of the *fukutoshin* by bridges and performing a background scenario to frame the TMG building complex. The designs of the open spaces follow the purposes of the main construction at the block and are not correlated by design to the other open spaces at the block. A better conception of a design linked to the idea of the whole will add unity to the character of the area, as well as it would provide continuity to the general purposes expressed at the beginning for the conception of the management of the *fukutoshin* plan of *Nishi Shinjuku*. (See Fig. 8)

## 7. Conclusions

The plan of the *fukutoshin* of *Nishi Shinjuku* conceived the development of a total restructure for a nodal city with special particularities, the idea of establishing an administrative and business center that becomes the new symbol of Japan, a capital inside the capital<sup>9)</sup>.

From this point of view, the fulfilling of the project was possible first due to a strict management, and a good connection of the area to the city traffic network under the constructions of fast connections through the trains and subways as an intermediate through the different sub centers that converge at the node, carrying workers and visitors<sup>10)</sup>.

In summary the conception of the *fukutoshin* was the realization of a foreign space that for volume and spatiality works as a separate administrative and business district, whose scale, design patterns and the conception of its regulated open spaces conformed to a structural complex not in accordance with the traditional Japanese city.

But if we focus on the planning process of creating new open spaces, the vital factor was the effort put on the separation of cars and pedestrians. The idea of this new improvement allowed for consideration of pedestrian deck areas and roads as separated spaces, but both included in the category of open space, in such a way as to assure a higher percentage of such areas in contrast to the standards for the rest of the city.

Up to here it could be said that there is a completion of the original purposes of the *fukutoshin* project, but when we analyze the composition of each one of the open spaces at the central blocks, there, could be found several cases disregard of the concept idea of integrating the different open spaces into a whole.

First, because there exist a severe discrepancy in the amount of percentage ratio of the block area dedicated to open space, the central management failed to predict the economic factors that interfered during the construction process. Such problem derives into an aberration of the original purposes for the allowance of volume transference and the height extension limits. The idea of maintaining uniformity in the rate standards for the open space areas, proposed in the central plan for the management of the *fukutoshin* of *Nishi Shinjuku* were, in that way, not totally overseen, especially since the pattern design and the composition of each one of the open spaces areas at the central eleven blocks have not followed a common criteria, each one in that way performing as a separate element. This is at the same time emphasized by a unreliable connecting network between the different open spaces, a phe-

nomenon which accentuates the spatial image of a constellation of independent open spaces each one following different purposes and not unified in only one concept.

The results obtained at the planning for these open spaces is a classic case of the flaws of manmade and one-sided overall planning insulated in a hard structure that doesn't allow a free interaction with the rest of the city. Such problems in the result of the open space planning of the *fukutoshin* of *Nishi Shinjuku* should be avoided in the future planning of Japanese cities, perhaps relying more on the idea of open spaces more related to the traditional overflow of Japanese cities which in exchange had a short rhythm in the dynamic of the use of open spaces, as well as a better adaptability in the evolution process.

### Special thanks

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# 西新宿（副都心）・高層街区における オープンスペースの創出と展開

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要約：西新宿は高層ビルとオープンスペースを特徴とする街区により新宿副都心を構成している。これは、東京の都心構造の再編戦略として1960年代前半に超高層ビルのビジネスセンター建設として構想されたものである。その内容は従来の丸の内を中心とした単一都心の都市構造を変えて、池袋、渋谷と共に3つの副都心として位置づけられた。

本論は、そのような新宿副都心を対象に、その中核をなす西新宿・高層ビル街区とオープンスペースの形成過程を、その創出から現在までの展開として歴史的観点から分析し、都市構造上の特徴や問題点を導き、今後の都市計画の知見を得ることを主眼としている。分析の結果、新宿副都心計画の焦点は、東京及び日本、広くはアジアにおける経済拠点の構築にあり、そのため様々なオフィスビル機能と共に都市交通ネットワークの利便性を高めることが重要課題であったこと。また高層ビル街区の公共オープンスペースとして計画された新宿中央公園は、この地区の顔となり、都市民の憩いの場として建設された。しかし、中心街区とこの公園との相互関係が十分でない。また従来の日本型都市空間には見られないセミパブリックなオープンスペースが多数計画されたものの、建物階数に見合った公開空地が十分に確保されておらず、そのデザインも街区毎に相違があるため、全体的な統一感が希薄であり、確保した量の効果が十分発揮されていないこと。更に街路空間の一部である歩行者空間とこれらセミパブリックな空間との「係わりの計画」に重要な課題が残されていることを指摘した。

キーワード：西新宿、副都心、再開発、オープンスペース、高層ビル

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