

Master plan for Poznań (1931-1939) as Compared with European Theory and Practice of City Development

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Modern urban planning in Poznań originated in 1902 by the decision of emperor William II on liquidation of the northern part of the inner ring of forts of the Prussian fortress, which for nearly 75 years of the 19th century hampered rational development of the city. The development plans of post-fortress areas and the zoning of the city enlarged by suburban communes were carried out in 1903 by the most eminent German urban planner, Josef H. Stübgen¹ (Fig.1).

The regaining of independence by Poland also involved a change in the functional and spatial propensity of Poznań, from westward to eastward. In 1925, seven suburban communes were incorporated. The area of the city nearly doubled – from 3405 to 6736 hectares – mainly on the right bank of the Warta river (up to 1975 ha), where, since the end of the 19th century, industry had been developing rapidly² (Fig.2).

The first “Master Plan for Poznań” was made in 1929 by Sylwester Pajzderski, the head of the Municipal Development Department. Its general assumptions were presented by the author in his article published in *Księga pamiątkowa miasta Poznania*³. The spatial concept of urban development was to be based on a system of green wedges, organised around river valleys. This concept was in harmony with models of city development that had



1. Zoning plan for Poznań by H.J. Stübgen (1903). State Archives in Poznań.

1. Kodym-Kozaczko G., *Rozwój przestrzenny Poznania w planowaniu urbanistycznym w latach 1900-1990*, [in:] *Architektura i urbanistyka Poznania w XX wieku*, edited by T. Jakimowicz, Poznań 2005, pp. 21-30.

2. Abt. S., *Ludność. Struktura demograficzna miasta*, [in:] *Dzieje Poznania*, vol. 2, edited by J. Topolski and L. Trzeciakowski, Warsaw-Poznań 1998, pp. 994-5.

3. Pajzderski S., *Rozbudowa miasta Poznania (Development of the City of Poznań)*, [in:] *Księga pamiątkowa Miasta Poznania (Commemorative Book of the City of Poznań)*, Poznań 1929, pp. 507-511.

developed since the end of the 19th century. In 1898 Teodor Fritsch presented an outline of 'the city of the future' with wedges of green areas penetrating the centres, located outside corridors of infrastructure⁴. Then, numerous versions of radial and concentric models of city development appeared in both theoretical works

and designs. This can be exemplified by designs submitted to the competition for Greater Berlin development in 1910, outlines of A. Rading, M. Wagner, M. Berg or master plans for Wrocław, Warsaw, et al.

Criticism of Pajzderski's design, expressed by Władysław Czarnecki under the auspices of Architectural Society (Koło Architektów), led in 1930 to the announcement of a competition for 'Designing regulations and master plan for the

4. Reiner T. A. , *The Place of the Ideal Community in Urban Planning*, Philadelphia 1963, pp. 36-39.

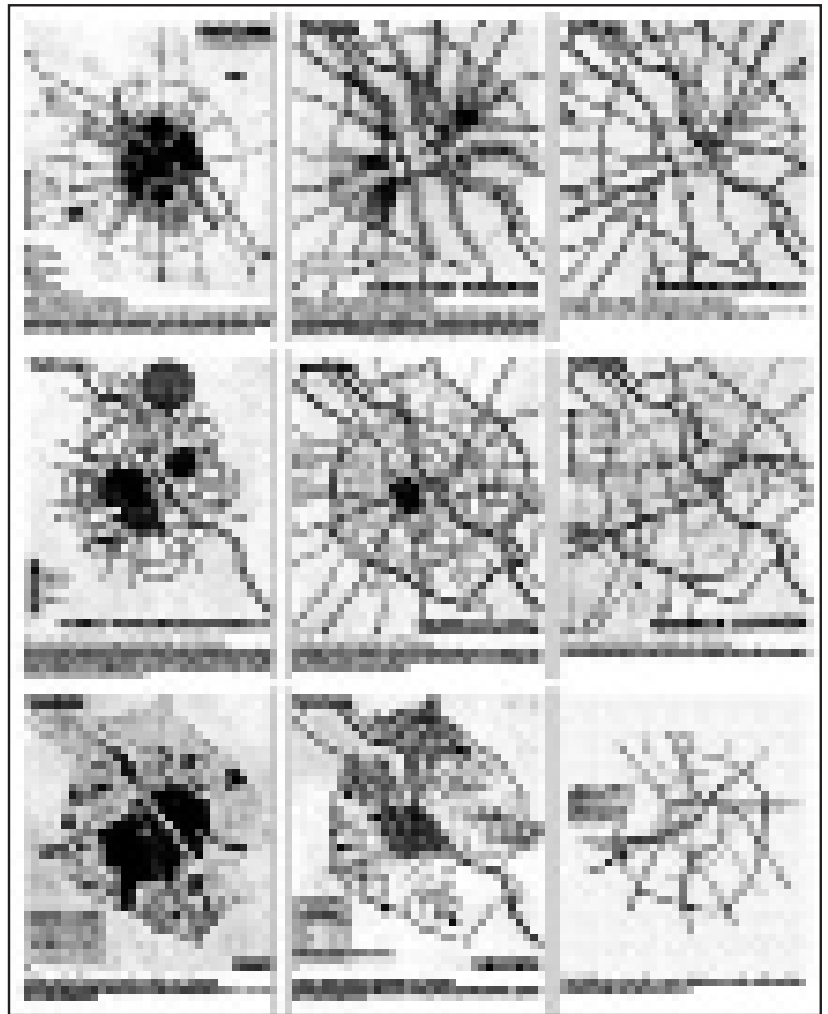
2. A 1929 map of Poznań, with a perspective of the Polish National Exhibition in the box. Maps of Poznań from 1803 till 1977, published in a *Gazeta Wyborcza* series in 2003 (reproduced from the University Library collection).



city of Poznań' with anticipated population of 800 thousand.

The decision of the jury was a grand triumph of Warsaw urban planning community. Most of the laureates were either graduates of the Faculty of Architecture of Warsaw Technical University, or took part in the work on successive stages of a master plan for Warsaw. Modern, functional ways of urban planning were presented as early as in 1928 in the magazine "Architektura i Budownictwo"⁵ by the team of "Master Plan for Greater Warsaw" headed by Stanisław Różański (Fig.3). They were different from traditional methods of design applied so far by some architects working, among others, for the Ministry of Public Works, like Adam Kuncewicz, Roman Feliński (the authors of the Gdynia development project) and Kazimierz Saski. Those methods were based on regulatory plans, and possibly – zoning⁶.

The award-winning plans were based on city function analysis. Third-prize winners, Józef Reński and Władysław Günath, suggested an integrated radial-circular system of transportation, based on an improved road system of the former Prussian fortress. The transport system was complemented by a system of green wedges (Fig.4). The winning team of Stanisław Filipkowski and Jan Graeffe noticed that the city centre had for ten centuries been developing along East-West axis. They suggested locating at the western end of the axis, at the vast post-railway areas, a modern retail and office downtown. It was a concept of a dynamic centre that resembled N. Ladovsky's concept of the development of Moscow from 1922. According to Filipkowski, Poznań 'was lucky to have an opportunity to move the future Centre from the densely and tightly built-up surroundings of square Wolności to the empty area nearby, which would make it possible to create a rational development of the area; besides a shift like this would allow us to avoid the expensive and difficult cutting through existing built-up areas and widening of streets.'⁷ This comment was made from the standpoint of an experienced designer of the Warsaw City, where the spatial situation was much more difficult than that of Poznań⁸. Like in Warsaw, the new Centre of Poznań was to be based on



3. Master Plan of Warsaw, studies of housing areas, transportation, division into districts, parks, cemeteries. From an urban-planning exhibition. Source: www.sarp.org.pl.

the crossing of arterial roads for different means of transport (grade-separated in Poznań). It was also suggested that the railway station be moved. Filipkowski and Graeffe combined the radial-circular plan of the public transport system with a system of peripheral service centres located evenly within city districts⁹.

As a consequence of the competition, the Urban Planning Office was established, under Władysław Czarnecki's direction; the Studio was entrusted with the task of creating a master plan for Poznań¹⁰. Czarnecki had not got systematic urban planning education as a student of architecture at Lvov Technical University, but he attended on a voluntary basis Ignacy Drexler's lectures on the theory of town building at the Department of Engineering. An important element

5. Różański Stanisław, Filipkowski Stanisław, Buckiewiczówna Maria (individual chapters), *Plan ogólny Wielkiej Warszawy*, „Architektura i Budownictwo”, 1928, pp. 410-438.

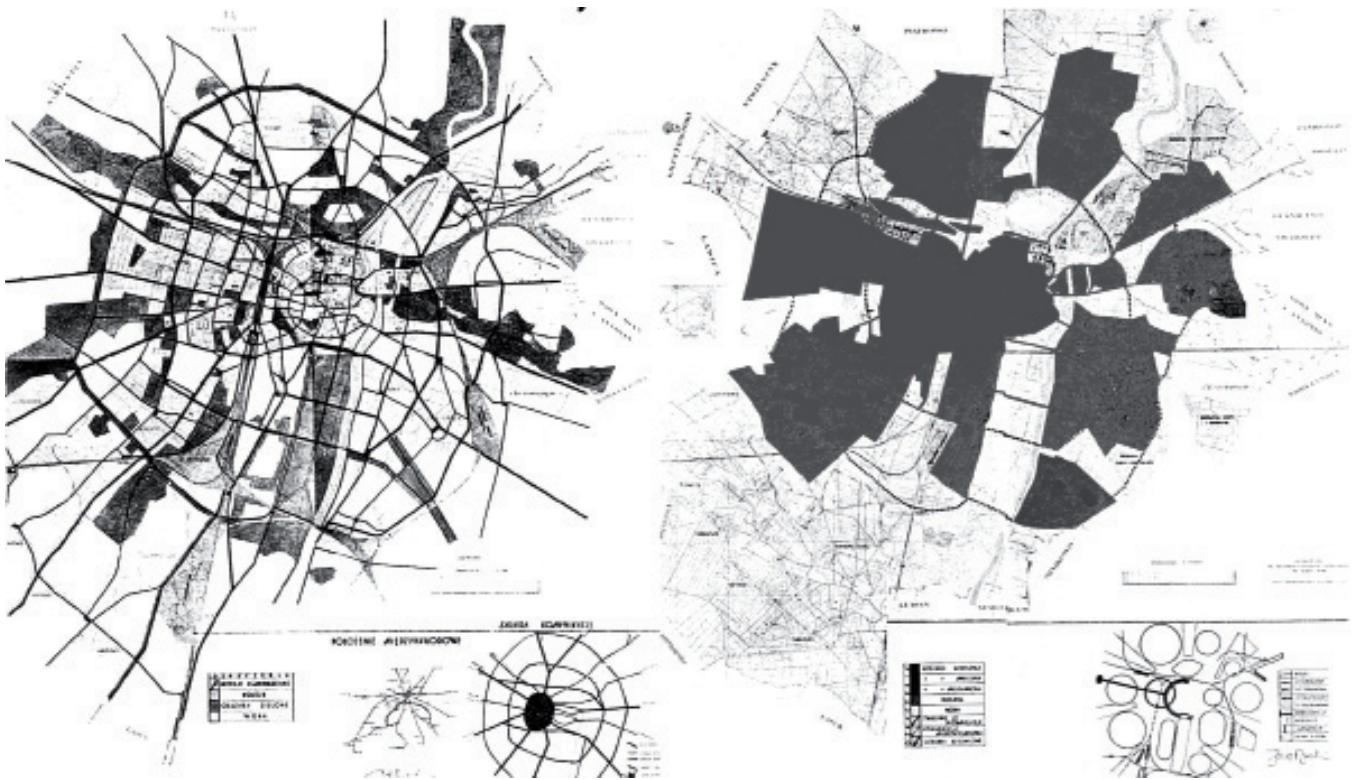
6. Saski Kazimierz, *Planowanie miast w Polsce w okresie powojennym*, „Architektura i Budownictwo”, 1926, vol. 6, pp. 5-24.

7. Filipkowski Stanisław, *Projekt rozwiązania śródmieścia Poznania*, „Dom. Osiedle. Mieszkanie”, 1933, Vol. 1, pp. 9-10.

8. Filipkowski Stanisław, *Dzielnice pracy*, [in:] *Plan ogólny Wielkiej Warszawy*, op. cit., pp. 416-417.

9. I prize: Stanisław Filipkowski, Jan Graeffe, II prize: Antoni Jawornicki, Kamil Lisowski, Tomira Słońska, III prize: Józef Reński, Władysław Günath, Paprocki Antoni, see *Konkurs na projekt regulacji i zabudowy m. Poznania*, „Architektura i Budownictwo”, R. 1932, pp. 1-8.

10. The Poznań Town Planning Studio before WWII employed, among others: Tomira Słońska, Jan Zbijewski, Wiktor Soczkiewicz, Zbigniew Zieliński, Kazimierz Gawroński, Marian Spychalski, Aleksander Pluciński, Jerzy Pieńczykowski, Wojciech Onitsch (Onitcz) [in:] Kodym-Kozaczko G., *Rozwój przestrzenny...*, op. cit., p. 39.



4. J. Reński, W. Gunath, entry for the 1931 competition for development and design regulations of Poznań. After *Architektura i Budownictwo* 1932, No. 1

of his professional experience was his function of a secretary of the Poznań competition and participation in the work of the jury composed of such persons as, e.g., Tadeusz Tołwiński, the director of Town Building Department at Warsaw Technical University, and Antoni Paprocki, the chairman of the Society of Polish Town Planners. However, the most important thing for his method of work at the master plan for Poznań was his visit to Berlin, in June 1931, to attend the exhibition of development plans for German cities, where he joined a tour of architects and town planners guided by a "Herr Professor" he had not met before. Later, in his memoirs, he wrote: (...) *It was simply a first-class lecture on town planning: about transport systems, green areas systems, (...) about zoning of areas for housing development, organisation of residential districts and housing estates, about delimitation and isolation of industrial districts. In this way, listening to the professor's explanations to the questions asked, we went through the stands of Berlin, Magdeburg, Bremen, Hamburg, Cologne, Wrocław, Dresden, Leipzig and other cities*¹¹.

Therefore, Czarnecki was a self-taught town planner, who acquired theoretical knowledge in confrontation with practice. His aspiration to grasp and perfect natural features of functional and spatial structure of the city was something he adopted from Drexler's lectures. The other principle in his work on the city plan was inspired

by the above-mentioned Berlin lecture: the ultimate solution must be achieved through in-depth studies which allow us to recognise the character and the problems of the city.

The study areas for the plan of Poznań corresponded to the functionalistic theory of city development, which in Poland was the most visible in the plan for Greater Warsaw (1934). The theory, in its canonic version, was presented in 1933 by the 4th CIAM Congress in the *Athens Charter*. According to it, the spatial structure of the city was created by four basic functions: 1. circulation; 2. living (with school systems and systems of public and shopping centres); 3. working (including industry) and 4. recreation (with systems of green areas).

Władysław Czarnecki started his work on the master plan for Poznań by defining future demographic growth of the city. In the competition requirements it was freely assumed that the population would grow from 237 thousand in 1930 to 800 thousand in 1980. On the basis of the study of Bremen he had brought from Berlin, Czarnecki calculated – using the "organic method" consisting in population growth forecasts – that in 50 years' time the population of Poznań would reach 600 thousand. In the early stages of their work, Czarnecki and his team regarded the above-mentioned *Stadt- und Landesplanung Bremen 1926-1930* as a kind of handbook¹².

11. Czarnecki Władysław, *Wspomnienia architekta, t. 2, 1931-1939*, Poznań 2006, pp. 9-10.

12. Publikacja *Stadt- und Landesplanung Bremen 1926-1930*, Bremen: Hauschild, 1931, is contained in the bibliography of several studies of the Poznań studio. See *Papierzy Władysława*

One of the first components of the master plan to be drawn-up was the system of green areas. The issues of green areas in functional and spatial structure of a modern city aroused great interest in Poznań. As early as in 1930 (i.e. before entries for the competition were requested), the Poznań Enthusiasts Society organised a scientific conference on urban greenery. Some of the speeches were later published in *Poznań Chronicle*. E. Strauss, one of the participants of the conference, said that (...) *it is time to give up the idea of urban gardens as decorations regarded by many as luxury. (...) The plan of development of green areas should head towards creating vast green and tree-covered spaces to serve as public parks, in order to create the biggest possible areas at the least possible cost. (...) Public parks should be methodically located in specific parts of the city to ensure easy access from every district, (...) to sports and games regarded as a health factor rather than professional sport*¹³. Following the German standards of urban greenery, Strauss – as well as other speakers – thought that the rate of urban green areas per inhabitant should be 19.5 m², while in Poznań it was only 6.1 m².

In 1932, having gathered the assumptions of earlier plans, competition entries, conference articles and using his own ideas, Władysław Czarnecki formulated a concept of green wedges

and rings for Poznań. It resembled the model of an ideal city *Sternstadt* by Paul Wolf, which Czarnecki was familiar with thanks to the *Städtebau* magazine, to which he subscribed¹⁴ (Fig. 5). The starting point of the composition was the landform features, i.e. four upland sectors divided by river valleys (the rivers Warta, Cybina and Bogdanka) which were retention areas, unsuitable for development. Post-fortress areas, partly wooded, where development was banned or limited, formed a semicircle (embankments - rings) and an outer circle of potential green areas. The existing greenery complexes, cemeteries on the outskirts of inner fortifications, Łęgi Dębińskie and Dębina woods, together with complexes around the city constitute the ground for the planned system of green areas.

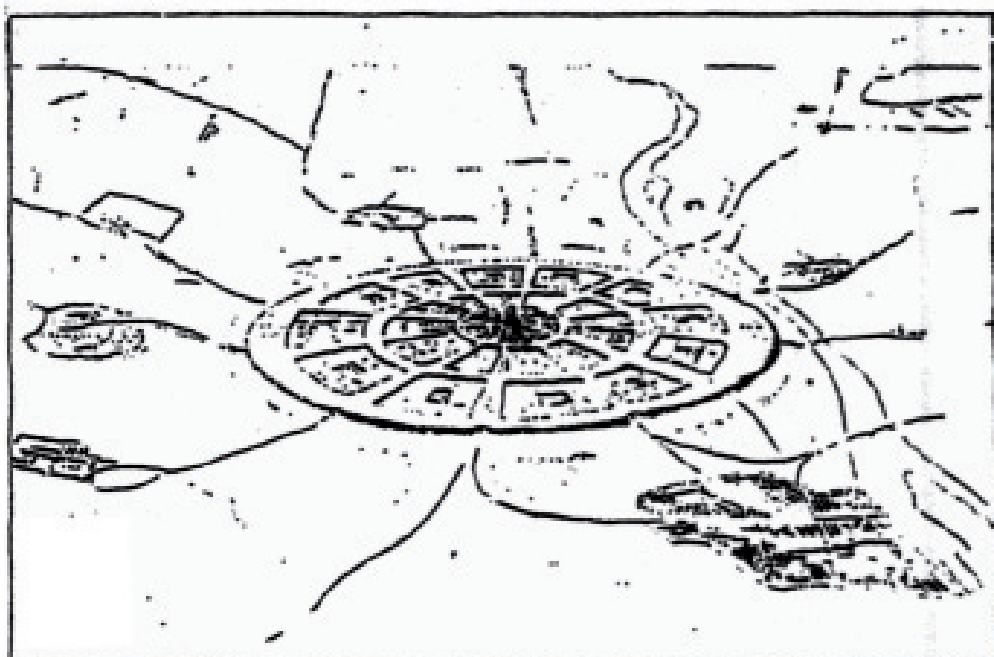
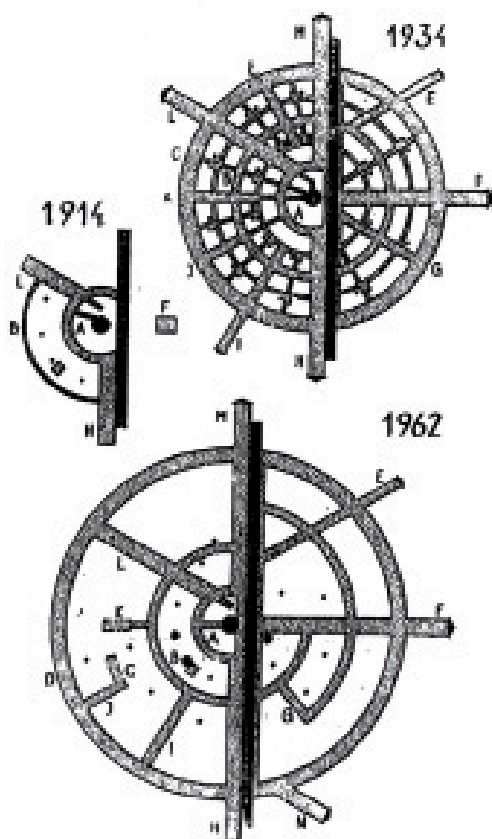
Therefore, the system of greenery was formed by two basic components: radial wedges and green rings. In further stages of work a total of 10 wedges was defined. Three green rings resulted from the spatial outline of the former Prussian fortress, and were partly present in Stübben's zoning plans made in 1903 and 1914. The outer ring was to counteract uncontrolled expansion of Poznań into the suburban areas. The concept of separating the city from the emerging housing estates with a ring of reserves (i.e. the space free from intensive development) was popular in town planning in the interwar period. It also appeared in the master plan for Warsaw, as well as in the 1926 "Competition for Regulation and Development of the City of

Czarneckiego, Biblioteka Raczyńskich, rkp. 2603, p. 98 i rkp. 2605, p. 24.

13. Strauss E., *Normy zieleni w miastach zachodnich*, „Kronika Miasta Poznania”, 1930, pp. 198-199.

14. Maul A., *Die „Idealstadt”*, „Städtebau”, 1929, pp. 313-314.

5. Poznań greens diagrams, 1913 and 1934 as well as P. Wolf's theoretical model *Sternstadt*. After *Miasto* 1972, No. 6 and *Städtebau* 1929, pp. 313-314.



Radom"¹⁵. Apart from recreational and sanitary functions, the area free from development ensured the preservation of reserve areas, which in future would enable flexible adjustment to unpredictable needs and functions. The system was complemented with regional greenery with e.g. public grounds (Fig. 6).

Functional division corresponded to spatial division: the green wedges were meant for active recreation, the rings were devoted to more leisurely everyday recreation. The wedges were to include nine district sports centres, three excursion and bicycle routes running to the areas of weekend recreation. They were complemented with the system of three circular cycle lanes.

The green promenade ring was to link residential areas with the areas of active

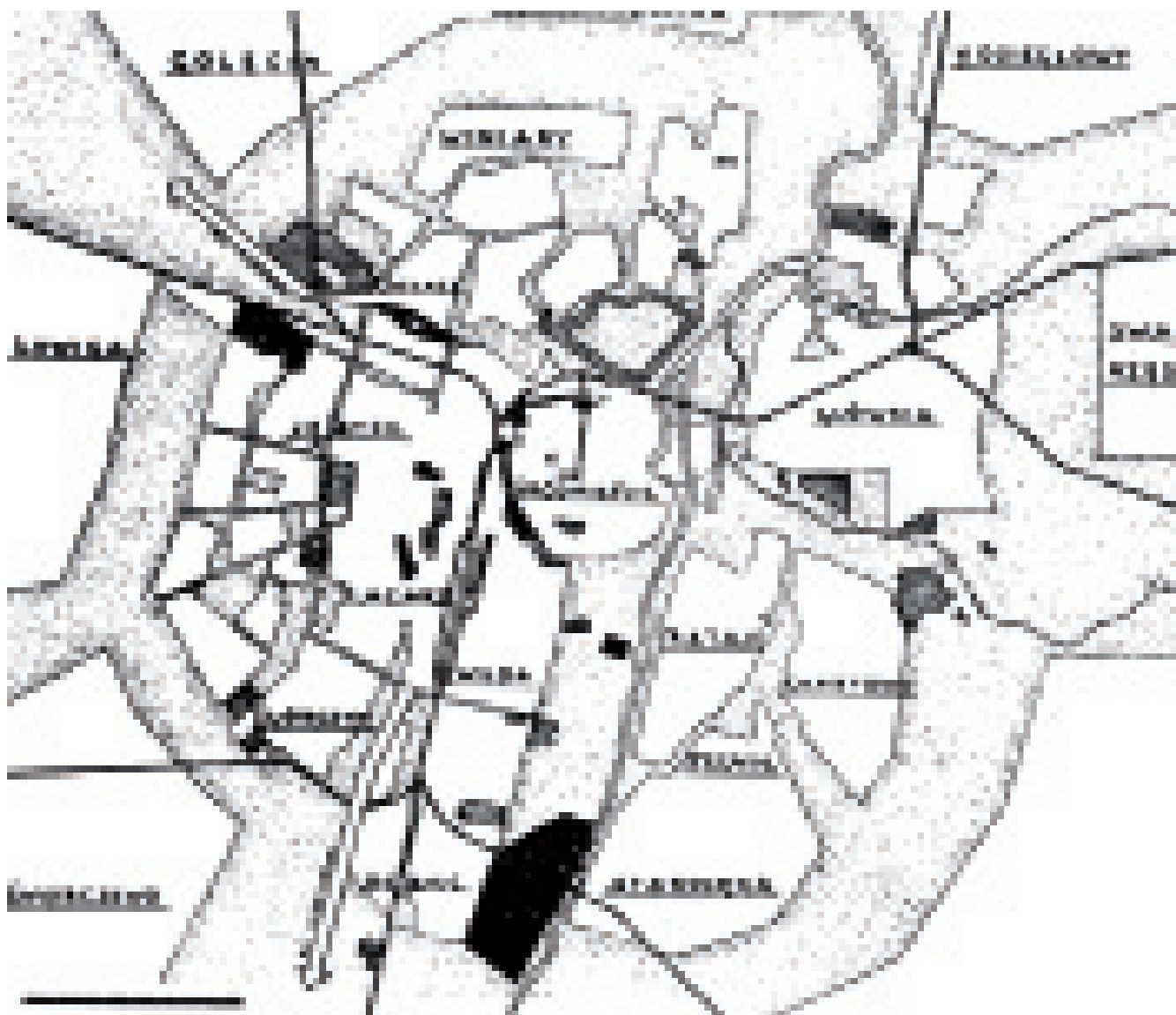
recreation, where there were community and service centres and school complexes, accessible from residential areas through secondary green stretches. Similar links between green wedges were designed for Warsaw. M. Buckiewiczówna wrote about them: (...) *this way green belts link residential districts with parks and sports gardens grouped in the wedges*¹⁶.

The system of education was to be based on schools with extended social syllabus. The "sports-field project", based on the German standards of range and attendance, was related to the system of greenery¹⁷. Housing estates with their centres were to be formed as the "neighbourhood units". The concept of a model shopping centre located at the junction of

15. Buckiewiczówna Maria, *Higiena urbanistyczna*, [in:] *Plan ogólny Wielkiej Warszawy*, op. cit., pp. 434-5; *Konkurs na regulację i zabudowę m. Radomia*, „Architektura i Budownictwo”, 1926, z. 9. p. 21.

16. Buckiewiczówna Maria, *Higiena urbanistyczna*, [in:] *Plan ogólny Wielkiej Warszawy*, op. cit., pp. 434-5;

17. Soczkiewicz Wiktor, *Studia do planu ogólnego m. Poznania. Plan finansowania programu boiskowego oraz najpotrzebniejszych budynków i urządzeń sportowych*, Biblioteka Raczyńskich, rkp. 2603, pp. 23-39.



6. W. Czarnecki Greens system of Poznań 1932 after W. Czarnecki, *Planowanie miast I osiedli vol. III*. 1961, p. 13



7. Circulation system of Poznań 1931-1939, after Miasto, 1972, No. 6

four neighbourhood units,¹⁸ worked out by Z. Zieliński, was inspired by Radburn C. Perry's neighbourhood. The zonal outline, modelled on Stübben's designs, specified the kind of planned building development; this kind of outline was a novelty for other Polish town planning studios. Czarnecki mentions Maryla Buckiewiczówna "trying [in 1931] to figure out the zonal outline" which in Warsaw included as many as sixteen building zones, while the Poznań outline had eight¹⁹.

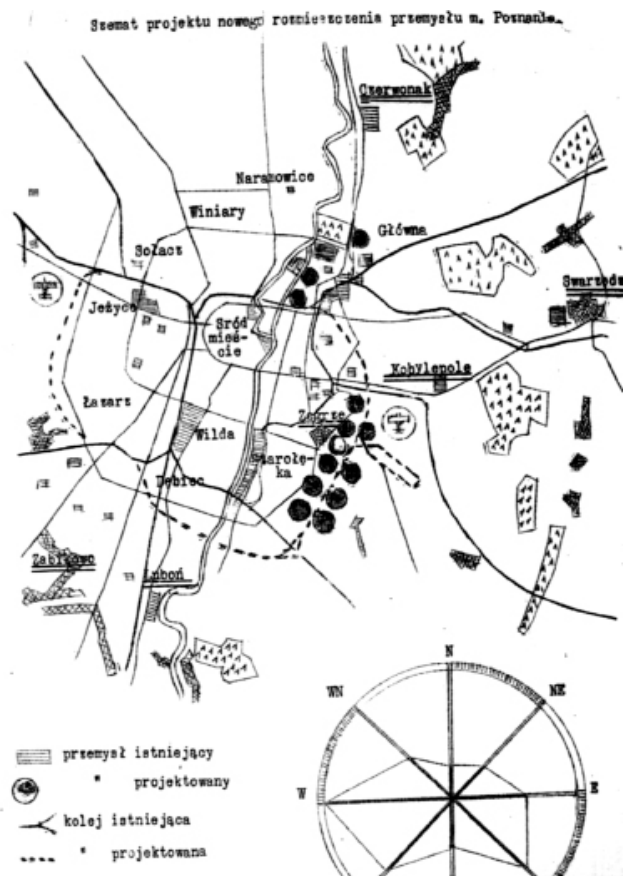
The radial-concentric transportation system, along with the system of green areas, constituted the second basic component of the spatial structure of the city. Worked out according to Hans Ludwig Sierks's theory²⁰, it resulted, first of all, from the existing condition, i.e. the transportation system inherited from the Prussian ring fortifications. The first ring was designed in 1903 by J. H. Stübben, the second one was constituted by the inner military-vehicle roads of the fortress, and the third one by the similar roads of the outer ring of the forts. Czarnecki's team, following Sierks's theory, intended to separate pedestrian traffic from road traffic. Where possible, they tried to eliminate the crossing of compact structural units by major roads, and introduced fundamental differentiation between residential streets and major roads running within screening greenery. The study of the economics of the existing and planned transport structure was based on the theory of ranges (zones of impact – propensity)²¹.

18. Czarnecki Władysław, *Wspomnienia*, Biblioteka Raczyńskich, rkp. 2394/I, p. 520.

19. Toeplitz Teodor, *O projekcie planu strefowego Warszawy*, „Architektura i Budownictwo”, 1927, p. 334.

20. Sierks Hans Ludvig, *Grundriss der sicheren, reichen, ruhigen Stadt*, Dresden 1929; tenże: *Wirtschaftlicher Städtebau und angewandte kommunale Verkehrswissenschaft*, Dresden 1929.

21. Czerny Władysław, *Architektura zespołów osiedleńczych*,



8. J. Zbijewski, studies for the master plan of Poznań – the industry. From Raczyński Library collections

The starting point for the study of the planned transport system was a comprehensive traffic study, carried out by police constables on major roads, junctions and bridges. According to Czarnecki, it was the first study of the kind carried out in Poland²². In 1936, prompted by the development of transport in European cities, an additional study was made, devoted to issues of safety of pedestrians and vehicles in city traffic²³ (Fig.7).

The studies of specific issues were preceded by analyses of current town planning theories. For example, the studies of location of industry and work places²⁴ included the discussion of the concepts of Erich Gloeden, Hans Ludwig Sierks and Nikolai Milutin. The author of the study Jan Zbijewski, in accordance with Sierks's theory of industry decentralisation, proposed a more or less even distribution of industrial plants in the

Warsaw 1972, p. 78.

22. Czarnecki Władysław, *Wspomnienia architekta*, op. cit., pp. 36-38; Czarnecki Władysław, *Studia do planu ogólnego zabudowania Poznania. Sieć komunikacyjna w Poznaniu*, Archiwum Zakładu Historii Architektury i Urbanistyki Wydziału Architektury Politechniki Poznańskiej.

23. Czarnecki Władysław, Zieliński Zbigniew, *Studia do planu zabudowania miasta Poznania. Regulacja ruchu ulicznego*, Biblioteka Raczyńskich, rkp. 2605, pp. 115-122.

24. Zbijewski Jan, *Schemat projektu rozmieszczenia przemysłu m. Poznania*. Zob. *Papiery Władysława Czarneckiego*, Biblioteka Raczyńskich, rkp. 2603, pp. 119- 26.

outskirts of the city. Because of the prevailing wind direction and favourable transport conditions, factories would be located mainly in a new industrial and housing district on the right bank of the Warta river. Decentralisation of industry proposed by Gloeden consisted in dividing the city into sections – similar in size and with a defined dominant function – separated from each other by green areas²⁵. Zbijewski introduced several “nests” with a homogeneous function: for example, in Zawady district a craft quarter was (partly) built for plants moved out of the Old Town. However, the design of the main part of the eastern industrial and housing district was to make a reference to Milutin’s linear city (part of Stalingrad) of 1930²⁶. A ring railway line with a transshipment station would form its eastern border, along which there would be industrial and warehouse areas, separated from parallel residential areas by screening greenery. The western border of the district would be formed

by green areas, running along the Warta river (Fig. 8).

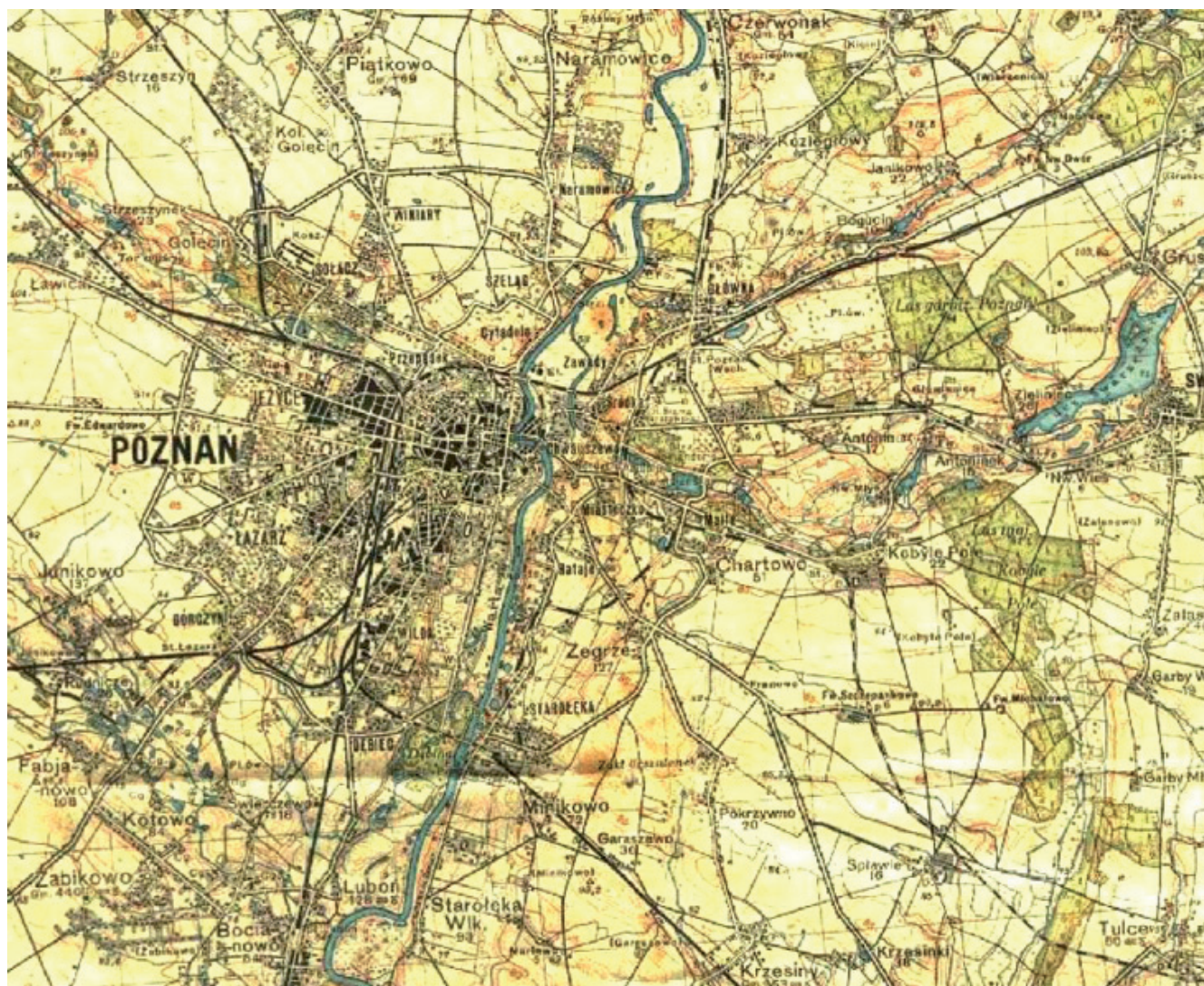
It was characteristic of the interwar team of the town planning studio that they did not try to hide the sources of inspiration for their studies and designs. Many ideas derived from books and magazines, mainly German, but also from study tours as well as participation in congresses of architecture and urban planning, both in Poland and abroad.

In 1932, Czarnecki attended the 2nd Polish National Town Planning Conference which was devoted to the problems of the development of Gdynia. *The aim of this convention was to answer the question of what should be done to save Gdynia. (...) It turned out that they did not know how to implement the design for the city in practice. Compulsory purchase of land was limited to the needs of the port and the railway alone, but no land was purchased for the development of the city. Gdynia was the most expensive Polish city, living on government subsidies. (...) House building was several times more expensive than in Poznań or Warsaw. Around the city, slums*

25. Ostrowski Waclaw, *Urbanistyka współczesna*, Warsaw 1975, p. 65.

26. Ostrowski Waclaw, op. cit., p. 73.

9. Map of Poznań – 1937.



sprang up in an uncontrollable and unplanned way²⁷. The observations made at the Gdynia congress were probably the reason why the Poznań Town Planning Office worked out plans for land purchase and ways of financing it for the most "land-consuming" projects; the plans were prepared in two time perspectives: 30 years for the worst-case scenario and 20 years for the best case. This was in line with the land policy of the city hall of Poznań. In 1938 it owned 23% of land in the city, which was unique in Poland²⁸. However, owing to this, the city was able to conduct a well-thought spatial management (Fig.9).

Czarnecki's visit to the international congress of architects in Prague, 1935, was an inspiration for the study of a system of district sports centres. In 1936, he went to the Berlin Olympic Games, and made a major research tour of Belgium, Holland, Germany and Switzerland. Afterwards, he wrote a report which he submitted to the city authorities. The most interesting observations referred to: an integrated public

transport system, segregation and safety of traffic, sports grounds (Berlin), housing policy and a system of green areas (Frankfurt am Main), a concept of the district school with an expanded socio-cultural syllabus (Frankfurt), a system of city forests (Berlin, Bremen)²⁹, district sports parks (Berlin, Bremen), organisation of the system of shopping, municipal cemeteries, minimal dwelling. In 1937 he attended the International Exhibition of Art and Technology in Paris and the 5th CIAM Congress on "Dwelling and Recreation" and "Town and country"³⁰. All the useful observations were reflected in his studies for the master plan of Poznań.

Unfortunately, the charts with the master plan of Poznań burnt in the fire of the city hall archives at the end of WWII. What survived was some of the texts of the studies, reproduced in a dozen or several dozen copies and sent by the Office to Poznań offices and other town planning studios in Poland. Many of them, prepared on the basis of thorough studies and foreign – mainly German – publications, were really innovative

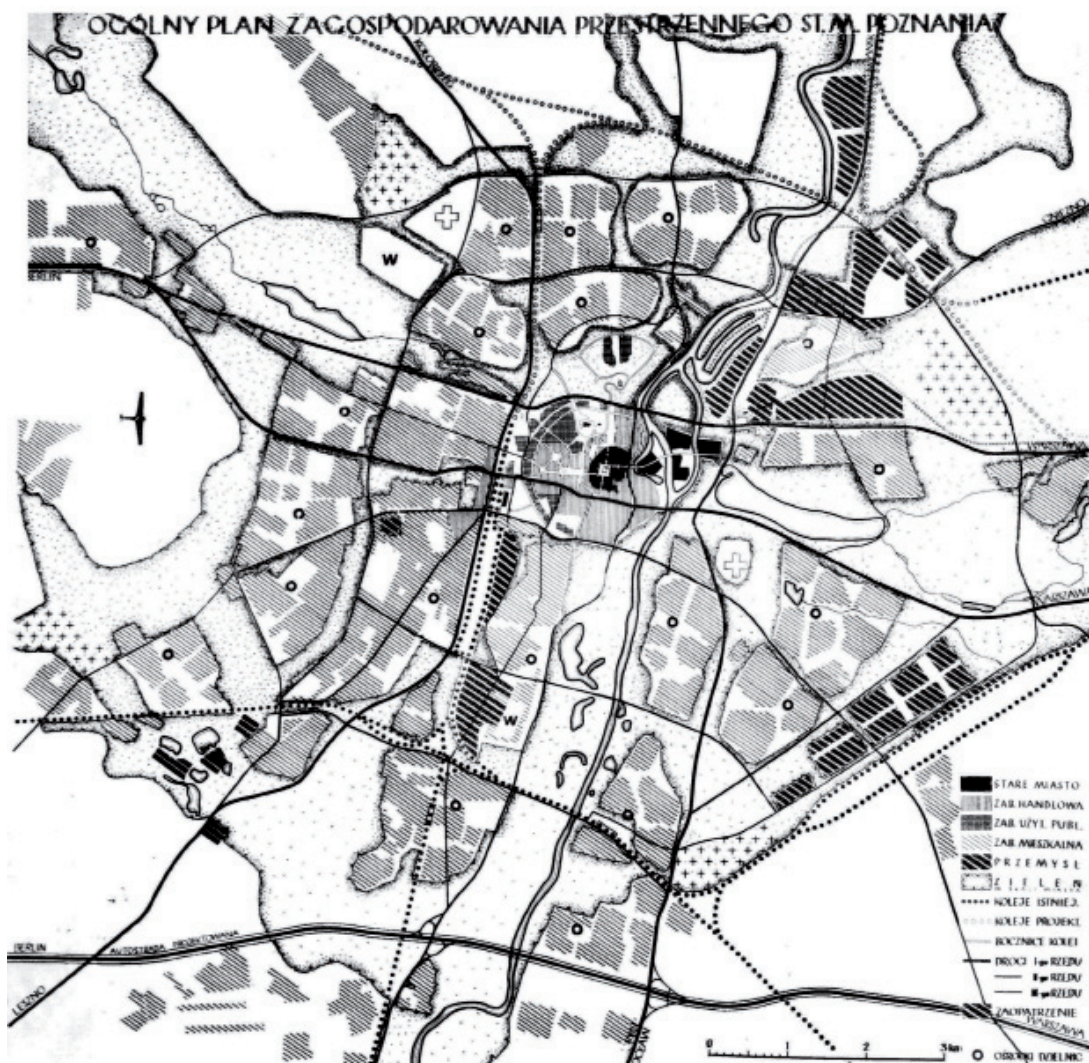
27. Czarnecki Władysław, *Wspomnienia architekta*, op. cit., vol. 2., p. 49

28. Nowakowska Krystyna, *Zarys rozwoju urbanistycznego i dziejów zabudowy Poznania w latach 1919-1939*, „Kronika Miasta Poznania”, 1989/2, p. 52.

29. Czarnecki Władysław, Płończak Tadeusz, *Studia do planu ogólnego zabudowania miasta Poznania. Lasy miejskie*, Biblioteka Raczyńskich, rkp. 2605, pp. 96-109.

30. Czarnecki Władysław, *Wspomnienia architekta*, op. cit., pp. 9-11, 49, 62-63, 71, 104-108, 133-134, 141-149, 199-217.

10. T. Płończak, L. Tomaszewski – Master Plan of Poznań 1946, developing the prewar concept.



and became part of the nation-wide discussion of the interwar period on theory and practice of town planning.

Olgierd Czerner, summing up town planning and architectural achievements of graduates of the Lvov Technical University, said: "*Perhaps the most effective was the activity of Władysław Czarnecki in Poznań. Regulation and transformation of the city, creating 'green wedges' captured the attention of his colleagues and other professionals*"³¹. The coherence of the planning process in prewar Poznań was owed

to the fact that design work for the whole city, detailed schedules for particular stages and supervision were done by the same studio. Apart from functional values, systemic town planning had outstanding aesthetic values. Poznań, which for historical reasons, was amorphous and incidental in form before World War I, gained a regular shape, integrating in a similar manner both the areas urbanised for a long time and those newly incorporated. Czarnecki and his planners, operating within crisis-stricken market economy, were guided by realism, always keeping in mind the public and social mission of town planners' (Fig. 10).

31. Czerner Olgierd, *Praojcowie i ojcowie. Dorobek polskich absolwentów Wydziału Architektonicznego Politechniki Lwowskiej*, Wrocław 1994-1995, p. 6.

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