

## PRUITT IGOE VS CITY OF THE FUTURE

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### Abstract

The idea of a modernist housing estate was aimed at determining the development of the current cities of the future. The idea developed throughout modernism gave justification for the statement that housing estates were intended to provide all the comforts to its inhabitants, but did not secure an ideal life. Something that was supposed to be clean and obvious did not come true. Attempts to secure a perfect space for the inhabitants contributed to the idea of a city of the future within our reach. Such utopian modernist settlements gave grounds for further developments involving intelligent settlements, cities of the future, living organisms with a central nervous system, capable of collecting and processing all information. The analysis presents a comparison of a housing estate and a city, the first of which became the base for the development of the other one.

Keywords: **Pruitt Igoe; Modernism, postmodernism; City of the future; Paredes, UOS.**

### 1. INTRODUCTION

The term postmodernism was introduced in the New York Times newspaper in the context of the presentation of the AT&T office building (currently 550 Madison Avenue, Sony Tower) in Manhattan, New York, designed by Philip Johnson. The author applied a separation of the function and form. The modernist functional connections to functional conditions were contrasted by the conscious decorativeness of the exterior. Louis Sullivan's statement "form follow function" was replaced by "form follows fiction" [10]. July 15, 1972 is considered as the symbolic date of the end of the Modernism era, the date of the closure of the housing estate Wendell Pruitt and William Igoe designed under the Minoru Yamasaki's project [11]. The spectacular demolition of Pruitt-Igoe marked the end of the new era in architecture, but also the beginning of new ideas [12].

### 2. THE PRUITT-IGOE HOUSING ESTATE

There are a variety of reasons for the fall of idealistic ideas. Houses, settlements and cities designed and built in this trend imposed restrictions on the residents. The reasons described for the closure of Pruitt-Igoe, depopulation resulting from the problems of crime and vandalism provide a symbol for the errors of modernism. Pruitt-Igoe (Fig. 1) was created according to hard designer drives, and the beauty of the buildings was determined solely by their functionality. The demolished Pruitt-Igoe comprised a complex of 33 blocks rising to 11 floors each, whose aesthetics was reminiscent of a large slab estate buildings that were once common in Poland. Initially, it aroused widespread approval. Residents praised the advantages: access to running water, sewerage, comforts associated with, for example, place for an individual bed for each member of the family, access to recreation and green areas inside and around the housing estate. Residents did not experience loneliness and isolation [19]. However, the idea of integration through modern social facilities did not come true, and the

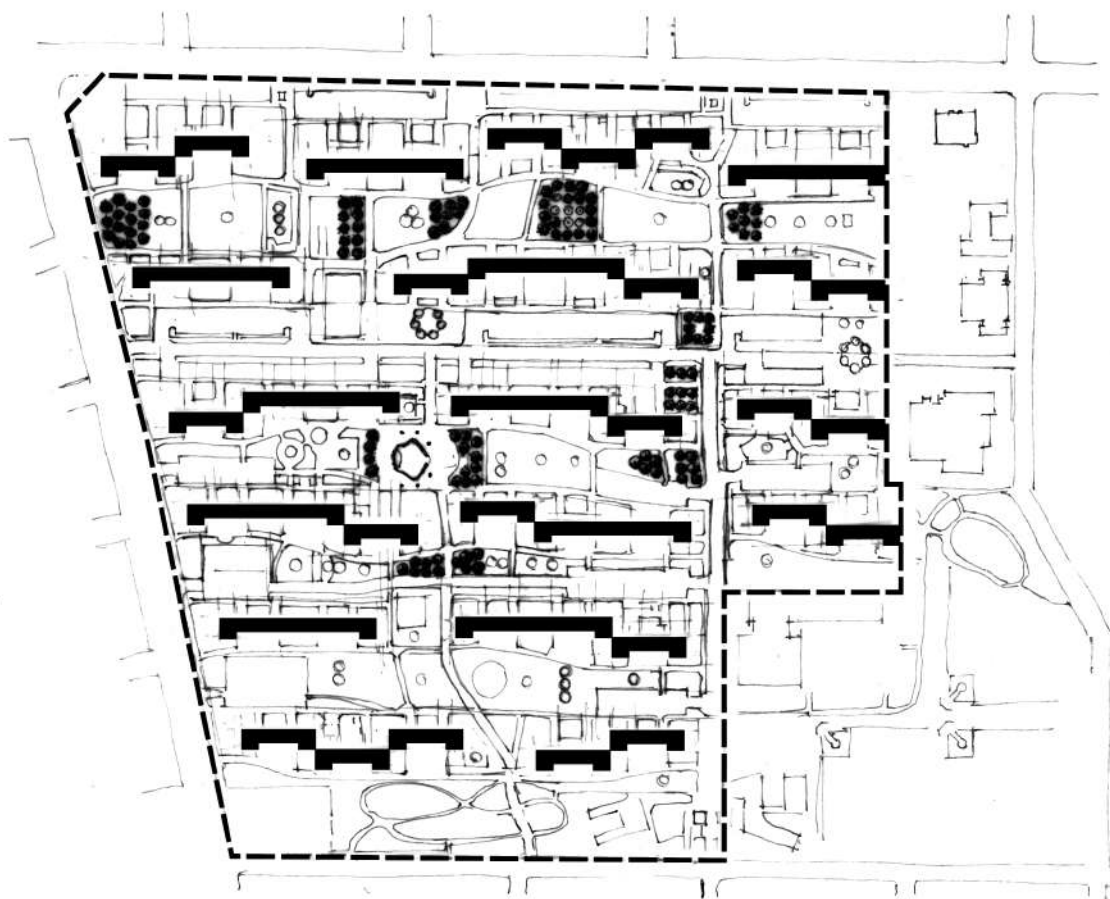


Figure 1.  
Development of the Pruitt-Igoe housing estate, author's own drawing [13]

history of this housing estate has entered the history of world architecture. The housing estate did not survive this, leaving impurities, lack of media and a group of residents left to vegetate in neglected buildings.

The scope of the Minoru Yamasaki's project was immortalized in Godfrey Reggio's documentary entitled "Koyaanisqatsi". In the film, harmony and the beauty of nature were confronted with images of civilization. The eloquent images of the liquidation of Pruitt-Igoe, carry a message of a disruption of the nature by man [20].

Attempts were made to correct the errors of modernist era. The 1950s corresponded to the period of redevelopment of the urban space. In this time, housing estates that were left empty during the day and industrial and service estates that were empty during the day were designed and built. The measures that were followed were guided by planning with a strict

separation of areas designed for residential and service purposes. This is the way in which cities that were developed did not meet the needs of residents. As a result, a massive urban migration to the suburbs occurred. The areas of the city that were not adjusted to the needs to the residents generated problems:

- only the less wealthy citizens remained in the urban space,
- for the reasons of social segregation into the rich and the poor, richer and poorer neighborhoods began to emerge.

*(The problems of segregation based on material status is addressed by Grzegorz Nawrot, who provides criteria for classifying apartments in a house based on financial capabilities into categories of wealthy, moderate, and poor. The division also concerned classification for cities dying out and developing and the ones in a state of stagnation) [8].*

- along with outflow of residents, an increasing

- degradation of urban space occurred,
- by failing to invest in valuable areas for the city, the condition of the natural environment has deteriorated.

The ideas of modernism were aimed at improving human life. The resistance of ideas opposed in relation to modernism grew from the mid-1950s. In the criticism of postmodernism, postmodernists accused the previous era of ignoring human needs by adopting an attitude of opposition against modernity, and by following a belief that architecture does not have to undergo technical progress, and creative work should depend on the context and personal affection of the investor and architect. Postmodernism in architecture has no uniform ideology, as it is not represented by a specific style in architecture, actually, postmodernism forms a protest.

The aspects considered to be postmodernism include:

- symbolism (Robert Venturi),
- romantic current developed by the neostylism (Hans Hollein),
- classisizing concept of the new vernacular (Leon and Rob Krier) [10].

These aspect include a number of common characteristics , including:

- a return in the classical sense to the definition of public space in the sense of the urban fabric (street, square) to replace the modernist housing estate with distinct quarters and districts, thus denying most of the principles of modern design [9],
- restoring the function to the facade, giving the building an individual feature and character,
- return of passages and narrow corners, scale differentiation.

The return to the traditional and historical composition of the city represents a postmodernist New Urbanism. As it is related to the work of the Krier brothers, in particular with Leon, who promotes an innovative organization of the urban community integrated with traditional elements such as apartment, building, store, school, work, park, entertainment along with range of such places within the walking and cycling distances.

New Urbanism defines [14]:

- focus on the public space,
- organization of the landscape: replenishment of buildings, underground car parks, reduction of visual chaos,

- role of greenery located near the streets, as well as in parks and squares,
- limitation of car transport, implementing the idea of traffic calming zones,
- care for infrastructure for pedestrians and cyclists,
- priority for road safety through intuitive solutions: intersections with priority to the right,
- implementing measures limiting urbanization,
- use of building quarters while maintaining the building line,
- differentiation of functions in order to socialize common spaces,
- sustainable development: the use of ecological solutions.

### 3. MODERN IDEAL OF THE CITY

New Urbanism forms a modern ideal of the city. It incorporates an unlimited demographic and spatial development of the city. Cities are derived from communities as tools for meeting the basic economic and social needs. In a simplified manner, the nowadays city houses comfort, aesthetics and safety. The development of cities offers a guarantee of a life enjoyed in a comfortable, aesthetic and well-kept environment. It means social diversity meant for the restoration of social bonds and designed so as to prevent exclusion, environmental protection as well as decrease of air pollution. Cities are for people [5], not for cars. In order to ensure that urban space is attractive and safe, transit traffic should be located outside of it, and the use of vehicles should become expendable. Such activities significantly increase pedestrian safety and have a positive impact on the natural environment. The city should become compact, multi-functional, and provide an opportunity for the development of a close neighborhood with the school, work, health center, small services and the recreation space [14].

How are the principles of New Urbanism applied in cities, why cannot you drive a car into the city center, why shouldn't we build a house in the suburbs and why should we be forced to ride a bike? Such guidelines form an impediment to a full life. However, as a result of technological development and changes in the mentality of residents, decision-making processes in the local communities are based in local governments, and with the increasing roles of urban movements and activism, physical culture and increasing awareness of the impact on the surrounding space and the environment all affect the promotion of new

urbanism. The definition of New Urbanism above offers an answer to these questions.

#### 4. THE CITY OF THE FUTURE

Are we aware what the city of the future will look like, how the current housing development will evolve within our technical capabilities? Projects of such cities already exist and some are even already implemented. However, we need to remember that projects do not have to reflect what will happen in the future.

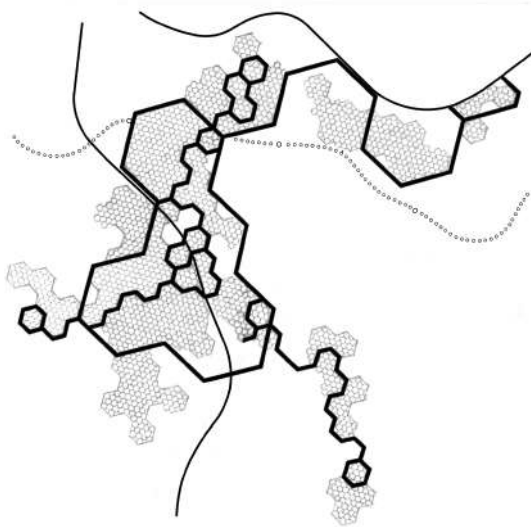


Figure 2.  
Layout of PlanIT, author's own drawing [18]

PlanIT Valley Smart City (Fig. 2), a new wonderful city of the future is designed for the purposes of a new wonderful human, and the city is to be built in Portugal within the small town of Paredes, twenty kilometers east of Porto. Approved by the municipality and recognized by the Portuguese government as “a project of national importance”. The model city of the future will be created to implement the urban UOS operating system – called “Urban Operating System”.

The city will be built on an area of 1.7 thousand hectares in several stages so as to ultimately accommodate 225,000 inhabitants. Equipped with processors designed for handling local information, embedded in objects, common surfaces and spaces, clothes, devices and vehicles, it is projected to generate a continuous stream of data for computers whose task is to control: water consumption and recovery, energy management, operation of wind turbines, solar cells, air conditioning

and waste management, up to 80% of which is to be used as a source of energy or recycled.

A computer network defined as the city's nervous system is to monitor all its functions. It will be used to acquire data, process, analyze, issue commands and even make decisions on its own [3, 7, 17]. UOS is a modular intelligent urban platform, developed by “Living PlanIT” company which is an UK-based company specializing in the design of computer networks. Such networks are projected to be used in the development of other similar smart cities in the near future. Living PlanIT SA deals with software development and data analysis and cooperates with: Cisco, IBM and Microsoft. The company has developed the first Urban Operating System. The objective stated by this company is to build new, sustainable cities of the future. They develop relations with various partners with the purpose of helping them design and implement new infrastructure ideas, including buildings capable of consuming fifty percent less energy and eighty percent less water. This smart city, PlanIT Valley in Portugal, has attracted the partnership of Cisco and is projected to implement new technologies, such as on-line traffic monitoring and intelligent buildings. The objective is to create a safe, effective and environmentally-friendly urban space [3, 7].

PlanIT will become an attempt to build a functional, modern, ecological and self-sufficient city, in which the digital network of connections will provide the flow of information regarding energy consumption, access control, travel, work, leisure and entertainment. Diversified buildings will be applied and supported by intelligent systems used for the protection of buildings and flats, and will be equipped with an intelligent alarm network, microcameras and all types of sensors, e.g. for waste disposal from properties. Public transport will be based on electric or hybrid cars.

It will include traffic control on main streets and intersections, night-time sensors for controlling streetlights and informing drivers about free parking spaces. The system will be capable of monitoring the level of air pollution, and if the limits are exceeded, an alarm will be initiated followed by countermeasures that can be immediately implemented. The residents thereof will experience the pleasure of using shops, cultural centers, sports and recreation centers, cinemas and parks. Trains will always arrive on time, streets will be cleared before the snow stops, doors can be opened automatically after a fingerprint or iris scan. Small crime will be eliminated [16].

Such projects will provide knowledge derived from



the so-called a newly created global system. The innovativeness of companies will be based on the access to acquired knowledge resources from almost every place in the city ranging from a street to an apartment. Companies such as Living PlanIT will play a decisive role in connecting “cities of knowledge” and sharing knowledge in different areas [2].

**Table 1.**  
Assessment criteria

Assessment criteri		Pruitt-Igoe	PlantIT
First group	→	+	+
Second group	→	+	-
Third group	→	-	+
Fourth group	→	-	-

**Table 2.**  
First group

Accessibility by foot	Facilities located 10 minutes of walking distance from home and work
	Buildings located close to a thoroughfare with windows facing the street
	Parking places on the street or in underground car parks
	Narrow streets designed for vehicular traffic with a low speed
	Areas for pedestrian and motor traffic
Network of links through communication paths	Network of interlinked streets providing redistribution of traffic and promoting walking routes
	Hierarchical streets: narrow streets, boulevards, avenues
	network of pedestrian connections and public spaces ensuring the attractiveness of walking through them
Increased density	Buildings, shops and service facilities located in the close vicinity
	More efficient use of resources and services
Green transport	High-quality transport network used to connect cities, towns and settlements
	Pedestrian-friendly design of cities, providing extensive use of bicycles, rollers, scooters and walking tours promoting everyday traffic
Quality of life	Access to running water, sewage, light, recreation and green areas inside and around the housing estate

**Table 3.**  
Second group

Uniformity of urban development	Uniform shape of buildings, standardization of housing areas
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## 5. RESEARCH

A summary of information below contains a comparison of the Pruitt-Igoe housing estate and the PlantIT city. The analysis was supported by author’s research, on the basis of the criteria developed for the assessment of space development and planning. Common characteristics determine the invariable conditions necessary to create new urban structures. Plus signs denote positive aspects, minuses mean negatives based on the author’s subjective comparative assessment.

**Table 4.**  
Third group

Mixed functionality and diversity	Mixing the functions of stores, offices, individual apartments in one place
	Mixed functionalities using the neighborhood within the block and inside the building
	Mixing people at different ages, income levels, cultures and races
Diversity of apartments	Various size of apartments
High quality architecture	Emphasis on beauty, aesthetics, comfort of the urban environment, creating a “sense of place”
	Rooting of the sense of public spaces in the community
Urban design	The human scale of architecture and a beautiful environment that supports the humanist spirit
Traditional neighborhood structure	Clear distinction between the center and the peripheries with a clear indication of this
	Creation of public spaces in the center
	High quality public spaces
	Main destinations used on a daily basis within a ten-minute walk
Sustainable development	The largest density of development in the city center gradually becoming less dense on the outskirts
	Minimal impact of buildings on the environment and its maximum use
	Eco-friendly technologies, respect for the environment and awareness of the value of natural systems
	Energy efficiency
	Limiting the use of non-renewable energy sources
Digitization of the connection network	Increase of local production
	More emphasis on walking, limitation of driving
	Flow of information on energy consumption, access control, movement, work, leisure and entertainment

**Table 5.**  
**Fourth group**

Social segregation	Racial segregation, material segregation
High-scale of objects	Buildings with several floors
Accumulation of population	Common spaces inside buildings
Deficiency in availability of sufficient communication	Insufficient number of parking spaces
Dry ambient environment	Lack of diversity in local environment

## 6. CONCLUSIONS

The Pruitt-Igoe district forms an example of a modernist housing estate in which misguided predictions regarding the courses of the city's development gave rise to plans that did not match the real conditions. The effect of the planners' intentions was associated with the widening of the gap between "better" and "poorer" areas, which led to class and racial segregation in urban space. Most of the inhabitants, unprepared for living in large blocks, were faced with the problem of common corridors and galleries. The development of communities guaranteeing all comforts of modern flats, without a prior integration program, led to degradation.

Intelligent cities supported by consistent operating systems, expanding and gradually occupying more areas like living organisms, based on the foundation of information technology is an inevitable future. The idea of cities served by systems that easily adapt to new environmental and social conditions will become a clumsy vision of democracy. The drive to collect and control huge amounts of data by private corporations, not responsible for citizens, will bring man to the role of data input, an individual with no privacy.

In "Lectures on Contemporary Urban Planning", Sławomir Gzell reminded that urban development should be durable and sustainable and, according to the literature of the twentieth century, the city's form should be relative:

- physical dimensions,
- density of population,
- type of public transport,
- form of the urban space [4].

According to the above, in the cities of the future, the attention paid to the center and periphery will become the key to their spatial definition and our

cities will be characterized by compactness, space organization, good communication and diversification of functions within the conglomeration [4].

The world is developing towards modern technology. The combination of modern factors with the most important characteristics needed for the operation of each city, i.e. a coherent city, social, economic and environmental cohesion, spatial synthesis, geographical location, economic conditions, political situation with the leveling up of the material level of inhabitants need to be stated as the directions of urban development.

Public space, social relations will be formed as a result of subjective feelings of users. The space will be determined by the individual feelings of people described from the stage, aesthetic, behavioral and economic view of the space [1]. The types of spaces that will be developed to form its brand space were identified by Wojciech Bonenberg:

- space that evokes fear,
- space that causes anger,
- space that evokes distaste or fear,
- space that causes depression,
- space that evokes a sense of pleasure, joy,
- space that evokes delight (excitement),
- space that raises hopes (optimism),
- space that calms down,
- space that arouses boredom,
- space that arouses interest [1].

The results of the present analysis demonstrate that the first group of adopted criteria, in which the positive characteristics common to Pruitt-Igoe and PlantIT were identified, may become the basis for the development of guidelines with regard to cities of the future in the subjective assessment of the author. Considering the trends in the development of modern technologies, the third group of the criteria can provide additional aspects to consider with the fact that the preferences of users and the types of emotional states that stimulate a person will determine the space in the cities of the future.

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