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THE CITY, THE HOUSING AND THE COMMUNITY PLAN SOME BASIC AND HISTORICAL CONSIDERATIONS

By

Hugo Leipziger



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Bureau of Municipal Research

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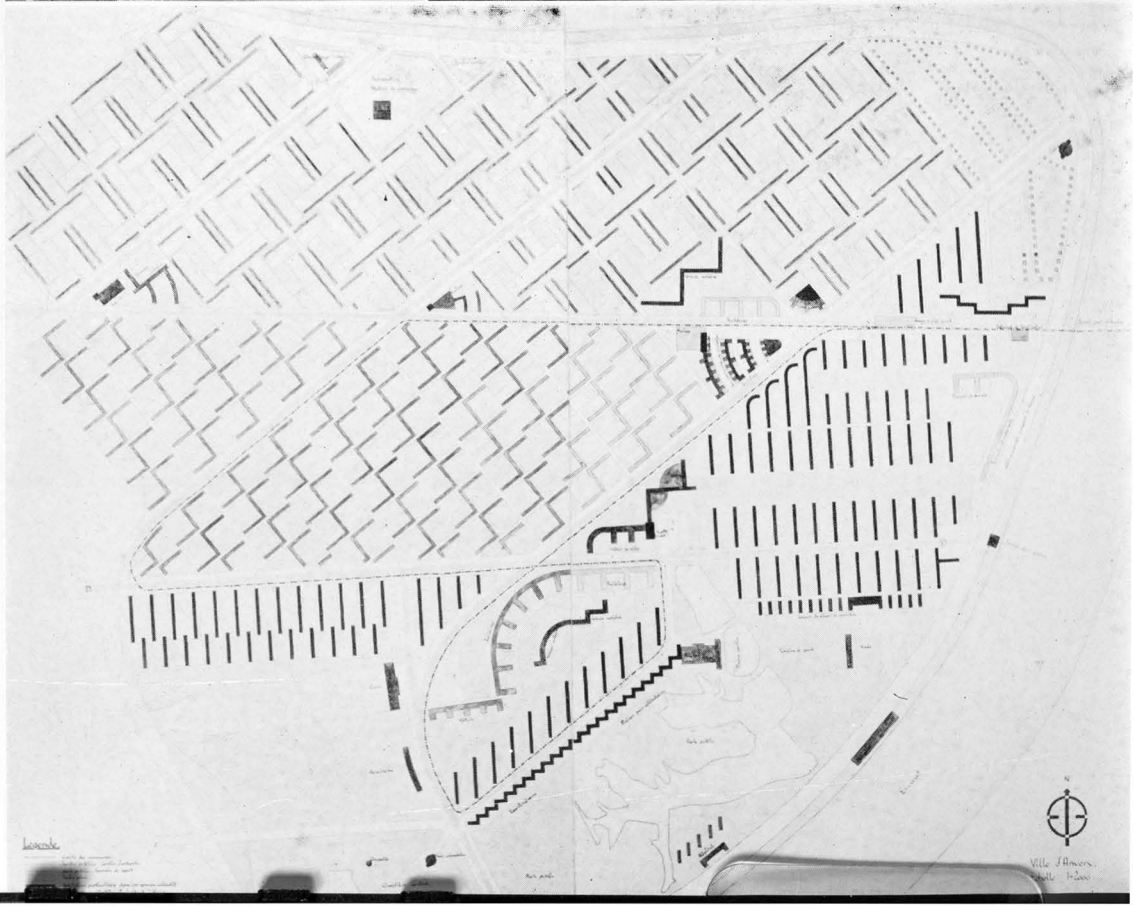
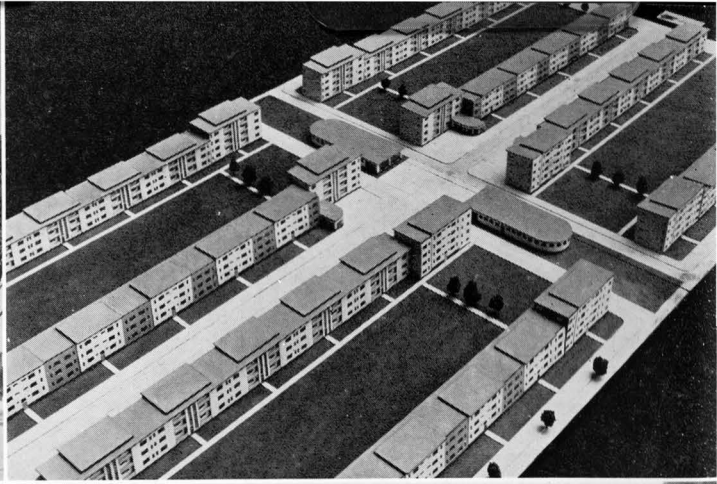
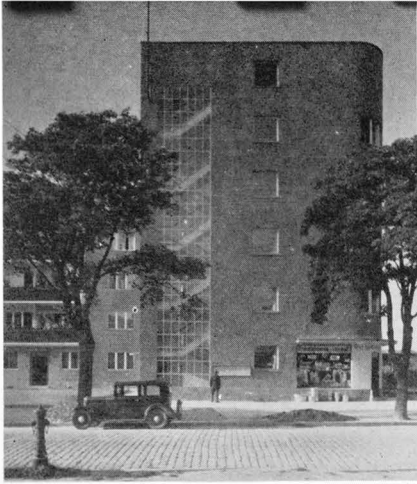
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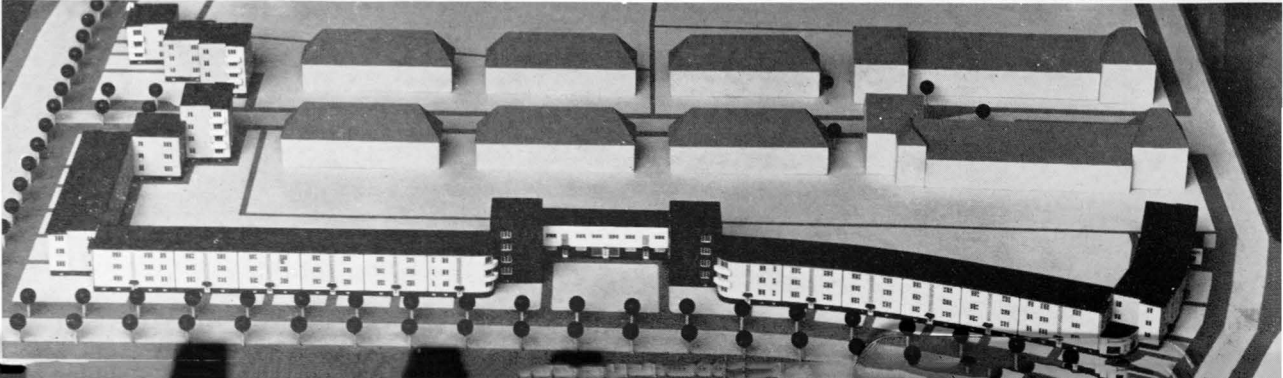
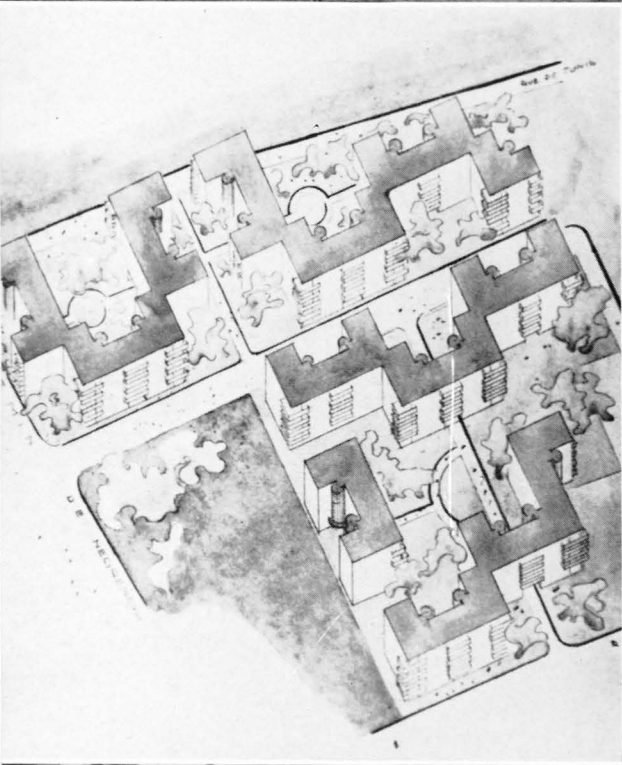
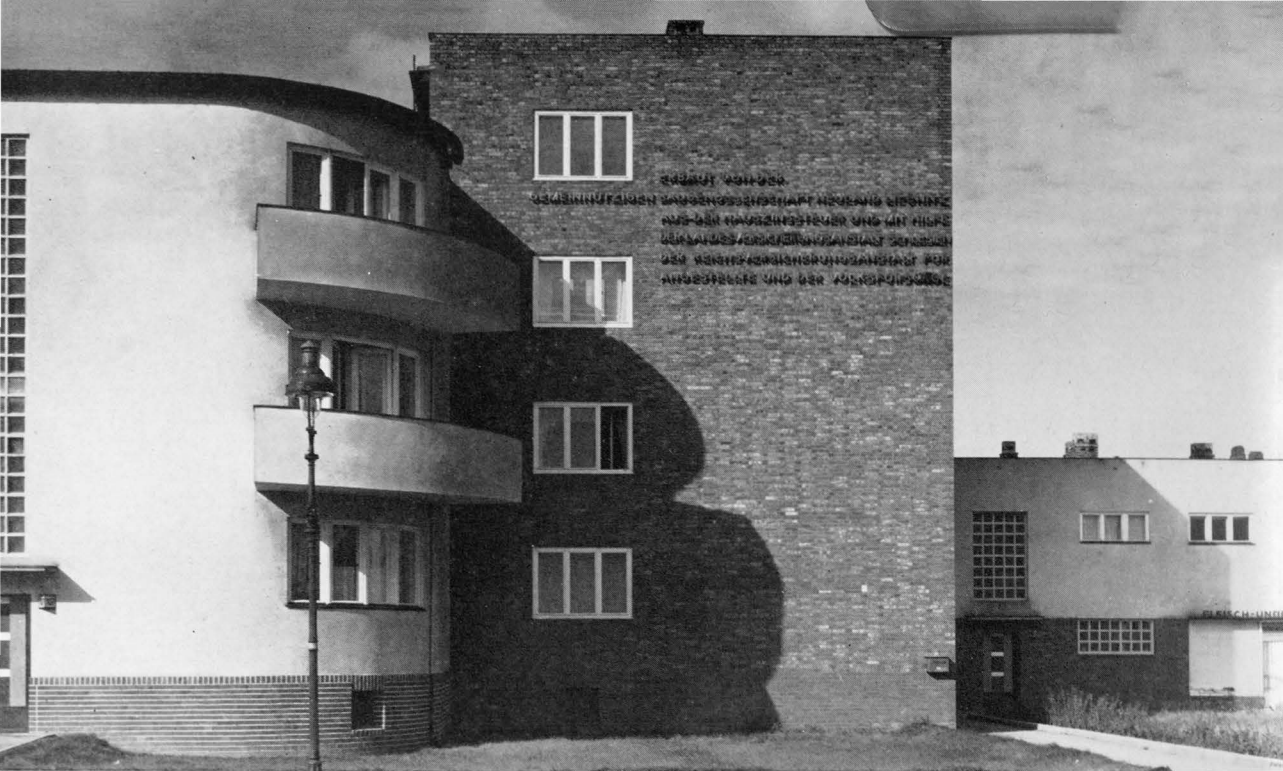
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The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston

Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.

Mirabeau B. Lamar

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*Photographs by the Author.

†All Projects and Sketches Designed by the Author.

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INTRODUCTION

The following discussion is dedicated primarily to men in the armed forces because they are fighting this war for liberty and progress. They will plan and build peace after the storm is over. Their occasional thoughts and ideas will therefore be valued as timely contribution towards such an anticipated challenge.

There are more questions asked than answers given because it seems to me that planning human environment should be a continuous as well as a coordinated process which draws its enlightenment from ever-increasing research efforts.

I have added some illustrations of my professional practice since 1927. A wide experience in housing and community planning has convinced me that the problems involved in this matter can neither be solved regionally nor by any one science alone, be it esthetics, engineering, or the physical and social sciences. Only the concerted and serious effort on the part of all those sciences will produce an adequate housing and community environment.

The preparatory work for this booklet was made possible by the Rockefeller Foundation which enabled me to teach and do research work at this University. I feel also greatly indebted to Dr. Homer P. Rainey, President of The University of Texas, and Dean W. R. Woolrich of the College of Engineering, Director of the Bureau of Engineering Research for their encouragement and great help. The funds for printing this booklet have been generously provided by the Research Aid and Publication Fund administered through the Research Council of The University of Texas.

HUGO LEIPZIGER.

Austin, Texas
August, 1942

"But indifference will not guide nations through civilization to the establishment of the perfect city of God."

—George Bernard Shaw

CHAPTER I

WHY DID WE FAIL TO ACHIEVE HUMAN SCALE?

Modern technological culture has tended thus far to impede man's power of reflective intelligence. Modern cities as well as rural settlements are neither conducive to *individual* meditation nor do they stimulate the urge for *gregariousness* by providing a favorable background for such activities. Instead, the modern "community" offers, by and large, no more than meager substitutes which foster on the contrary human isolation on one hand and mass hysteria on the other. This situation carries much greater moral responsibility in the rise of Fascism and Nazism than is generally acknowledged. But Robert Sinclair's¹ analysis of the "typical" case of London before the war must also be considered proof of this assumption. In discussing the futility of adopted half measures* like the "Sixty Year Plan" from 1909 designed to relieve London's notorious house-starvation, he says: "Most reforms must wait until the natural inertia of dozens of well meaning bodies has been overcome. It is only on the flood tide of disaster that reform comes quickly." The Ministry of Building and that of Planning recently established by the British Government and the new "Master Plan for London" seem to verify Sinclair's somber warning.

It is gratifying to see that scientific criticism which arose over this unbearable situation for some time is now recognized by the professions and the public alike. At last a front is forming for the attack of the complex problem by, first of all, creating *principles* of planning from which the modern community may derive its own inspiration. Robert Owen's formulation of a Utopian community and the attempts of an eclectic nineteenth century are now gradually being replaced by coördinative scientific conceptions. Furthermore, instead of following the pathological method, which deals with emergency matters and breakdowns, applied scientific and philosophical thought undertakes the articulation of functional prerequisites for the modern community in town and country. An integrated scientific system is bound to match and pool psychological, physiological, and biological life necessities with economic, sociological, cultural, and technological conceptions, the only basic procedure by which we can hope to overcome the present crisis. Potorim Sorokin² has

¹Sinclair, Robert, "The Big City."

*Leipziger, Hugo: "Problems of Housing, an Appreciation of its Latent Affiliations," paper read at First Texas Housing Conference, The University of Texas, April, 1940.

Ibid., "Post War Problems are Facing a Dilemma," *Journal of Architecture, Engineering, and Industry*, College of Engineering, The University of Texas, September, 1941.

Ibid., "City Planning and Housing, the First Line of Advance," *Southwestern Social Science Quarterly*, December, 1941.

²Sorokin, Potorim, "Social and Cultural Dynamics," Vols. 1, 2, 3, 4.

shown through analysis of art expression the various phases which the pendulum of culture describes in its constant move between the two poles of idealism and materialism. The continuous decline of idealism since its height from the 13th to the 15th century has now reached the actual crisis stage of materialism.

Numerous critics of our maladjusted physical environment fail to recognize the decay symptoms as a veritable crisis. Albert Mayer³ speaks of "lack of imagination in design which is minimizing the value of most of the large scale housing being built" and asks "how to incorporate in our large scale housing projects physical, moral, spiritual, and civic values . . . which we all agree are integral parts of our tradition, integral issues in this war, and integral objectives for our national life after the war." Commenting that large scale housing projects are not just the multiplication of some few units, he continues, "It simply means a reflection in design of the realization that a community is an integrated, interrelated summation of living individuals, not a multiplication of cells. . . . It is a tremendous human responsibility to create a community."

This realization, coming from one of the leading architect-planners in this country is typical of the change in attitude which the whole profession is gradually undergoing. This has found eloquent expression in numerous critical comments and articles in professional publications and the daily press, thereby stimulating planning interest.

The Telesis group in California; Task, the Eastern discussion group publication; "Washington, the planned city without a plan," a controversial exhibit in 1939 by a Washington, D. C., architects' group; the American Association of Scientific Workers' committees on planning, these are only some of the names in the array of a fast growing physical planning vanguard. But we must also pay homage to the *pioneers* whose far-sighted and relentless efforts for more than fifty years have made possible the new trend in physical planning.

Apart from planning projects for resources, recreation, or industry like the T.V.A. or the National Park Systems, active community planning is still in the conjectural phase. *We are much too onesided in our concern for the organization angle, taking for granted that the subject matter to be organized is already in the bag.* The facts speak loudly against any such assumption. On the contrary, we are only beginning to formulate the problems waiting for a solution by means of research and experimentation.

The impressive degree of technological capability has to be supplemented by principles for the sake of equilibrium in modern physical environment. Highly skilled yet uncoördinated planning efforts in the past have resulted only too often in a successful operation with the patient dead. This implies clearly the necessity for further investigation in basic human needs.

"Principles" are defined as "fundamental truths as basis of reasoning." As such they are of a highly philosophical and scientific nature, and nothing could be more erroneous than to expect results from "a new and more *practical* approach to the whole problem of replanning cities" which is advocated by some critics. There is no reason to assume any fundamental difference in

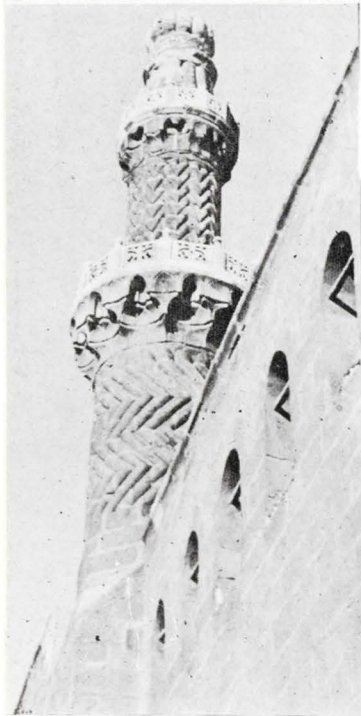
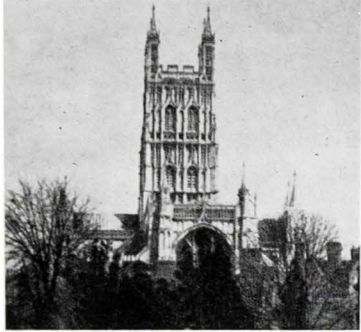
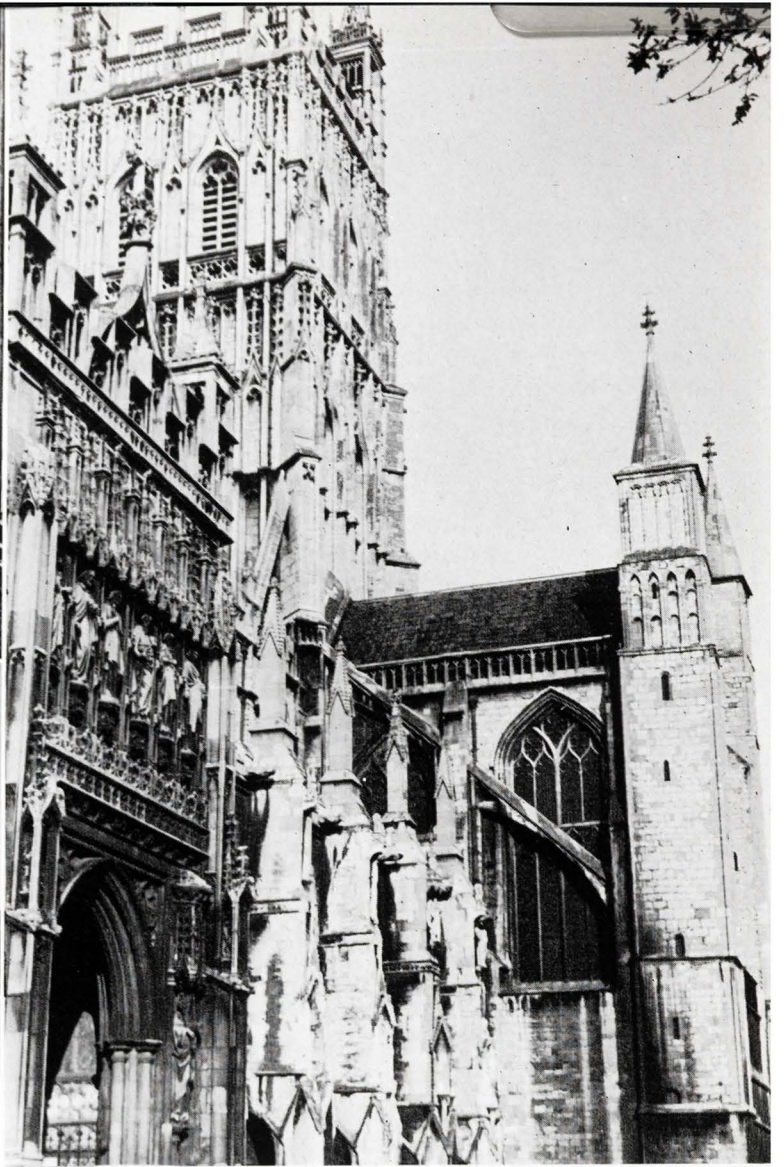
³Mayer, Albert, "Why Dreary Housing Projects?" *Survey Graphic*, February, 1942.

procedure for analyzing biological man or his social organism. In both cases the scientific diagnosis is the basis for any adjustment. Fundamental truths or principles are proven right or wrong by scientific procedures which are used also for their translation into action. Scientific procedure therefore, seems to be the only feasible way to deal with a subject matter such as environmental planning. Prophecies like the collapse of our mechanized civilization and pseudo-scientific opinions based on a superficial understanding of regionalism should not find any serious consideration. We have to follow the rational approach instead of simply voicing our preferences, likes, or dislikes.

We also recognize in the work of Frank Lloyd Wright, Le Corbusier, and Alvar Aalto scientific analytical as well as synthetic efforts. Attractive slogans such as "hive of the irresponsible" in evaluating Le Corbusier's research suggestions or "disintegration of community form" in referring to those of Frank Lloyd Wright or Alvar Aalto are not much in the way of constructive contribution. "Broadacre City," the Mars group's "Master plan for London," and "La Ville Radieuse" represent the most advanced thinking in modern physical community planning. These are no Utopias, but simply attempts to take on, almost singlehanded, a coöperative task of enormous scope. We must recognize the existence of a perspective in which modern eugenics, child and adult education, dietetics and therapeutical methods are directly related to horticultural conceptions such as advanced by Luther Burbank.⁴ This approach has many points in common with "Broadacre City." The "Master Plan for London" is directly based on economic science which asks for the adaptation of a pattern in accordance with the new "distribution phase." "La Ville Radieuse" has tried to utilize ecological exploits by drawing analogous conclusions between biological and physiological life processes and the physical pattern for traffic, communication, work, recreation, and living. The three proposals share one common characteristic that of an organic approach.

By discussing many phases of this complex problem, we shall here attempt to show the basic importance and relationship of different scientific disciplines. All of them are indispensable requirements for the highly complicated process of creating principles, which in turn are the prerequisites for any successful housing and community planning policy. It is not intended to "solve the problem" or even to give a complete summary of all factors involved, since such a task depends on the intensity with which research can be continued on an ever-growing scale. It is rather a contribution to the fiercely raging discussion over an agreed problem. Recognition is sought for the issue that only broader and deeper knowledge of the complex subject matter can and will guarantee that individual and group efforts may work in the desired direction. *A drifting conception of the role which science and art should play in planning human environment must find articulate expression in form of adequate scientific principles.*

⁴Burbank, Luther, "The Harvest of the Years," Houghton Mifflin Co., Boston and New York, 1927.



Photos by Hugo Leipziger

"Indeed art has never been great when it was not providing an iconography for a living religion."

—George Bernard Shaw

"The only surviving artists in the scholastic Gothic sense are scientists, surgeons, and engineers."

—Ananda K. Coomaraswamy

CHAPTER II

EVIDENCE OF THE GOTHIC SUCCESS IN TOWN PLANNING

Community Planning is the exponent in all considerations aiming at the rehabilitation of city, town, and country. This means that urban and rural planning of whatever description, must be focused around the human angle as the all-important motive. *Planning for a lasting Democracy must recognize this as one of its most potent and convincing sources of accumulating strength.*

Community and family alike demand some kind of symbolic physical environment. We can find such a meditative symbolization of community or civic spirit in the form of architecture and town planning all through human history. Though regionally and even individually varying in every one phase of any given civilization, including our own, the presence of this endeavor indicates a basic human performance.

As for our Western civilization, the story of Gothic man is illustrative. It can still be read from architectural documents such as cathedrals, churches, guild-halls, and even complete town layouts. These symbolic witnesses of a bygone cultural phase have been subjected to scientific analysis and comparative methods. Combined with documentary reports they have enabled the historians to draw a clear picture of the cultural, economic, and technological motives and principles from which these creations must have once originated. *This chapter of western history deserves much greater attention regarding modern community planning problems because it contains many analogies to our present situation.*

The display of medieval cultural life expresses to us at best certain aesthetic qualities if we fail to recognize it in the light of its originators' spiritual and intellectual ambitions. The Gothic spirit, dating back to the days of Charlemagne, can be characterized as the revival of learning. A new movement, with the universities as centers, ushered in the 12th century by building magnificent cathedrals like those of Rheims, Chartres, and Paris. This perpetuated and enlarged the role which the older institutions of monastery and church had played as seats of learning and civic consciousness.

St. Augustine's dream of a united Christian Europe without regard to race, culture, or even economics had preceded those passionate visions of the Gothic era for a new social order. His twenty-two books on the "City of God" were conceived and written following the fall and sacking of "inviolate" Rome in A. D. 410 after eleven hundred years of unparalleled triumph. The shock resulting from this event which threw all civilized world in utter confusion

can be compared with our present situation. Whatever our own reactions towards St. Augustine's work are, from a literary point of view, its influence upon the following Gothic era must be rated equal to that of Plato's "Republic" and "Laws" upon the Hellenistic culture for which they became the idealistic basis. Without proper appreciation of these circumstances, the social, economic, and cultural life of medieval man, including his aesthetic sensitivity, will reveal to the contemporary observer little more than other and similar "mysteries" of a "curious" Oriental world.

Since the symbolic meaning of Gothic architecture and town planning is all-inclusive, it seems impossible to interpret and evaluate them without the help of modern history, sociology, and psychology. The aesthetics of Gothic symbolism in the form of architectural, pictorial, and sculptural expressions captivate our interest most, but we forget too easily that a purely functional aspect is also involved. *This attitude originates from our practice of over-emphasizing the physical function in modern community planning while ignoring mental and spiritual functions.* Just the opposite approach is characteristic for Gothic thinking in which mental and spiritual aspirations have a functional significance for physical planning.

Medieval town planning and the cathedral-university movement are directly related to each other. Using modern terminology for describing the use of art in those days we are inclined to draw a parallel to modern psychology in advertising. The "violent tenor of life"¹ during medieval times with its strong and rich contrasts must be taken as the true scale for measuring the psychological impact of educational and physical environment upon the individual and his behavior.

"Six Appeal in Advertising"¹ is the title of an analysis which reveals the submarginal cultural level of modern methods in advertising. The symbolic language which was used in medieval "advertising" in form of art production disseminated in reality the spirit of Christianity and received full understanding and response from an alert community. Gothic aesthetics making its appearance as a synonymous style are filled with the contents of accepted ethic principles. This explains the secret of Gothic symbolism and its educational and propagandistic value which is clearly of a psychological nature. In this respect it is closely related to modern mental hygiene which is obliged to present a strong case against any abuse of psychology in modern advertising.

The pointed arch tied to a skeleton of ribs with light panel fillings is the technical contribution of the Gothic, thereby replacing the old Roman vault. This inventive engineering feat, though a very ancient problem, certainly did not originate from purely technical curiosity. It resulted from the desire to give life expression to the Gothic ambition by reflecting it into visual and symbolic form, thus creating wider and higher spaces than had ever been attempted before. An effort of similar scope can be found in the simultaneous endeavor to unify Europe into one single civilization by means of reason and aesthetic awareness.

¹Huizinga, Johan, "The Waning of the Middle Ages," E. Arnolds Co., 1924.

²*Readers Digest*, January, 1941.

The structural principles of a highly scientific Gothic architecture and the revolutionary spirit behind it produced a new style in one single century. In fact, the scientific character of Gothic building was of such magnitude that it was later-on subject to complete misinterpretation due to ignorance even during the "Gothic Revival" in the early 18th century. Gothic vaults and ribs improved the thousand year old tradition of the Roman vault. But the Gothic pier was a new structural conception which reached perfection in many examples balancing horizontal and vertical forces in form of thrust and counterthrust of arches, roof, flying buttresses, nave, vault, and lower aisle. Large windows were utilized by opening all solid wall space between the piers. Masterpieces of slender mullions carried tracery and colored glass panels according to structural necessities. Minimum loads were calculated thereby achieving enormous window dimensions. Truly functional in a physical, mental, and spiritual sense, the medieval method represents fullest integration of Art and Science.

The issues which are involved in the medieval drama are the more interesting because of their recurrence in modern times. Despite many signs to the contrary, today we are no longer confronted with the alternative of comfort or hardship, progress or retardment for the development of body and mind since an unlimited machinery for production can provide abundant food, clothing, dwelling, transportation, and luxury comforts.

The modern problem arises from the recognition that human freedom and dignity can only be maintained by individual acceptance of civic-conscious responsibilities towards the organic community. This involves the creation of those environmental factors which promise most for continuous cultural progress, which in turn implies scientific adventure and philosophic speculation, both means and ends of education.

Medieval man has splendidly demonstrated how to employ the elements of mental hygiene, how to create tension and harmony, how to achieve true human values in his physical environment by contrasting them with the super human scale of monumental cathedrals. His was the art of building civilized cities in which to cherish the things of the mind and to nourish his passionate urge for righteousness and aesthetic and intellectual satisfaction.

We cannot possibly overestimate or overemphasize Gothic conceptions and principles of community planning. The medieval city exemplifies the possibility for conceiving the kind of quality in physical environment best conducive to a rich and graceful life. The ritual, the ceremony which has almost disappeared from our daily life, the strong contrasts between town and country, the violent atmosphere of excitement and passion, the idea of honor as well as the attitude towards ascetism, torture and execution, all these are parts of an atmosphere which "bore the mixed smell of blood and roses." We are inclined today to speak of these symptoms as characteristics of the "Dark Ages." Yet historic evaluation of human and social behavior reveals the relativity of terms like living standards, comfort, and hardship.

Contrary to common belief the 12th century town, in contrast to the village, was far from being unhygienic; in fact, it was a masterpiece of physical environment. Sanitary regulations such as for hospitalization, street cleaning, slaughtering outside the city walls are numerous. Despite many shortcomings the Gothic city layout must be considered as functionally comprehensive, guaranteeing the pursuit of opportunities and progress. *The prodigious success of blending the material as well as the mental and spiritual functions into one harmonious physical entity is in distinct contrast to our own achievements.* What counts most in this tumultuous exhibition of the medieval genius is its ambition to find the scale with which to gauge the secular and religious, the material and spiritual interests of the individual and community. Therefore, the success of Gothic man in amalgamating all social forces into creative tension is undeniable.

Despite its final and disappointing failure, Gothic culture which must be described as Christianity in action, developed idealistic vision exhibited in our rich documentary heritage from which we can read the intriguing story. The chords of "frozen music" in stone, carving, buttresses, and stained glass windows, the lofty naves at Notre Dame, Canterbury, or Rheims, the Royal portal at Chartres, the countless Apocalypses and Last Judgments are still speaking to us in their original glorious language although the vivid color has vanished which made the whole still more extreme in emotional impact.

Aesthetics carried by the strong current of Christian ethics against the background of a university movement developed that degree of passionate philosophic speculation which was strong enough to drive scholarship and craftsmanship into another bid for human progress.

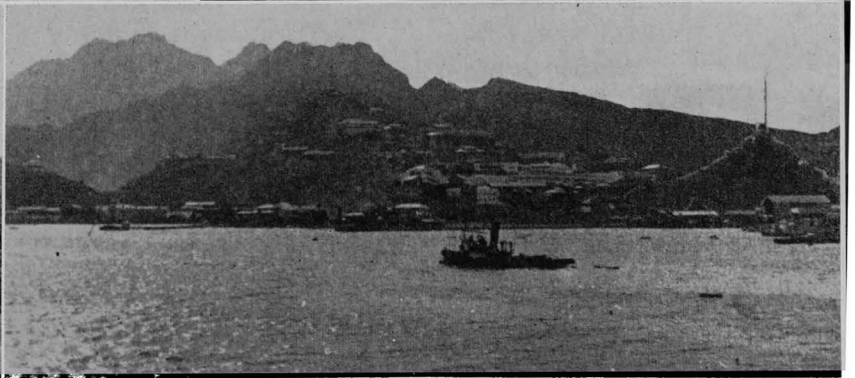
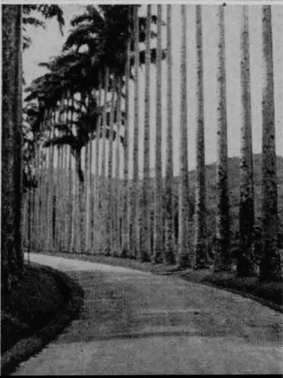
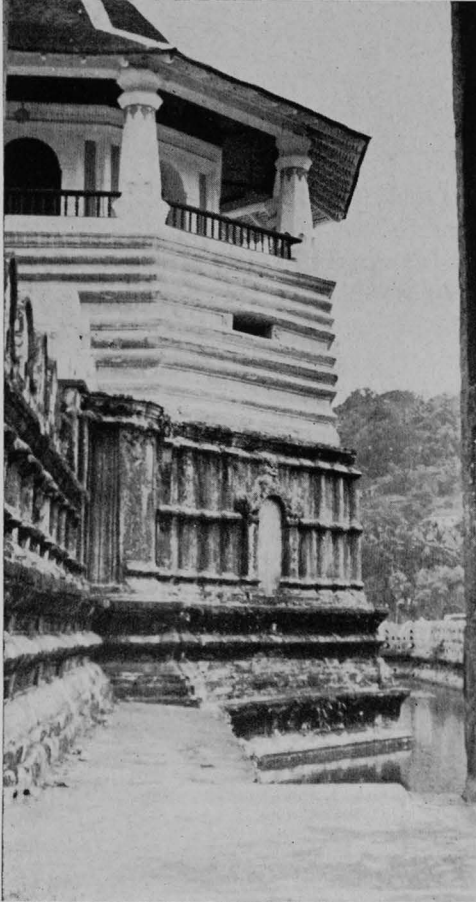
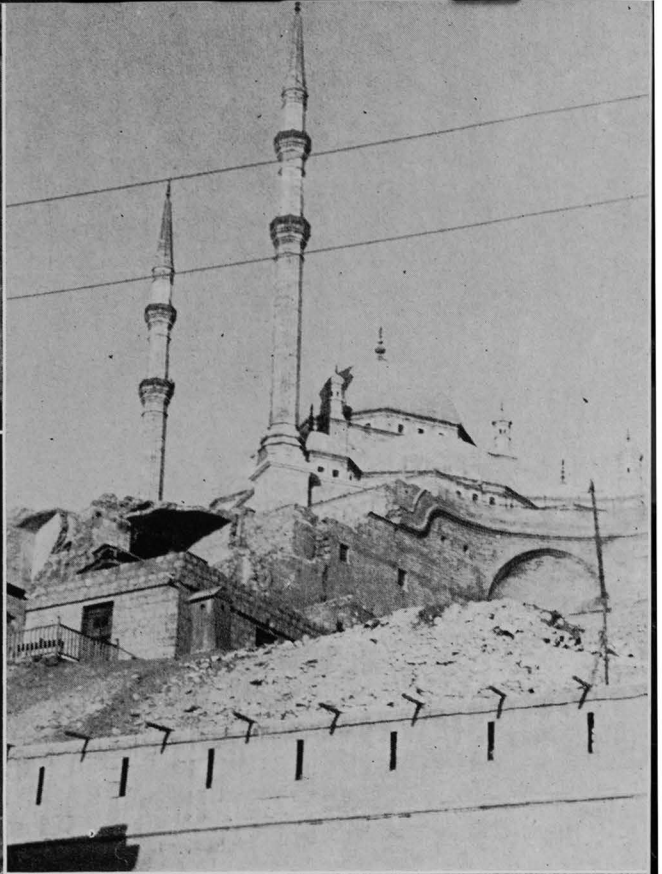


PLATE IV

Photos by Hugo Leipziger

“Obviously, we have not yet achieved scientific understanding and control of art, or of human nature by the means of art, in any degree approaching that to which we have achieved these ends in other fields of phenomena. . . . Through psychology and its educational and therapeutic applications, we are beginning the scientific conquest of mental phenomena.”

—Thomas Monroe

CHAPTER III

THE REHABILITATION OF AESTHETICS IN HUMAN ENVIRONMENT

The postulate that all sciences form ultimately one single complementary and coördinative unit holds for housing and communal city planning as for any other scientific field. But the *philosophical discipline is of primary importance for the creation of planning principles by utilizing aesthetics and historical interpretation as well as the contributions of many social and physical sciences.* All scientific speculation is now looking for genetic relationships among collected “static facts” with the individual as a self-conscious end in mind. This is a definite departure from the Victorian attitude of positivistic science which developed the observation of facts and not the explanation of their causes.

We have two alternatives, “either the renunciation of the unification of science or the introduction of metaphysical propositions into science.”² Much superficial antagonism can be eliminated by reconciling scientific and philosophical principles. This seemingly unsolvable proposition offers no more difficulties than the integration of scientific and artistic principles. Both processes represent the necessary prelude for the success of modern civilization.

In former days religion kept the civic communities from falling apart and this was responsible for progressive ambitions in the form of artistic and scientific creations. In other words, ethical principles interpreted through the medium of art perpetuated the emotional element, thus stimulating intelligence and sensibility and nourishing idealism.

Henri Bergson³ sees in *emotion* a stimulus quite different from *sensation* which “cannot be reduced like the latter to the psychical transposition of a physical stimulus.” . . . “An emotion is an affective stirring of the soul, but a surface agitation is one thing, an upheaval of the depth another.” And he concludes: “that a new emotion is the source of the great creations of art, of science and of civilization in general there seems to be no doubt.”

Human intelligence exposed to the infectious character of emotional reflexes may extend into concentrated group efforts such as we can observe in medieval Europe. Psychology and mental hygiene are well aware of the important role which directed emotion plays in human and social behavior. This points to

²Frank, Philip, “Between Physics and Philosophy,” Harvard University Press, Cambridge, Mass., 1941.

³Bergson, Henri, “Morality and Religion,” Henry Holt & Company, New York, 1935.

the rediscovery of applied aesthetics for the purpose of reorientating the complex aspects of modern society.

The scale of human sensations is subject to analysis in physics, psychology, physiology, and the history of science. The outcome of such investigations should clarify the role which philosophy, science, and art have to take in order to serve evolution. This would also eliminate their antagonistic opposition to each other. The confusing aspect of terminology with its transitions from physical to metaphysical language must be forced into equations. This would automatically remove isolationism of specialized knowledge.

From the many references to Hegel in Walt Whitman's writings we can follow closely the influence which the former exercised upon transcendental thought in America. The most significant fact remains that both Whitman and Hegel conceived metaphysics as part of this material world. They also agreed about the necessity for utilization of modern science in philosophy by transcending its logic into the spiritual sphere. Hegel by way of "absolute logic" followed Kant's and Plato's approach of ratio for an understanding of nature's laws while Whitman preferred the intuitive method of Emerson and Schelling's transcendentalism for the realization that metaphysical discovery is based on the oneness of nature and the human mind.

Goethe⁴ once commented: "Kant did an infinite deal by writing the *Critique of Pure Reason*; but the circle is not yet complete. Now, some able man should write the *Critique of the Senses and Understanding of Man*." This demand has been renewed and even carried further in recent times among others by Alexis Carrel,⁵ who says: "We should not forget that our knowledge of man is still rudimentary. . . . We need therefore an institution capable of providing for the uninterrupted pursuit of at least a century of investigations concerning man. . . . We must rescue the individual from the state of intellectual, moral, and physiological atrophy brought about by modern conditions of life."

The all-scientific validity of philosophical thought is even better illustrated by Hegel's famous postulate that "Every quantity if sufficiently increased, turns into quality." This principle was developed 150 years ago by Hegel together with Kant's conception that space and time are forms of experience. It has since been accepted not only in physics, biology, and history but also as thesis in the political philosophy of the U. S. S. R. *Translated from its abstract sense into the language of physical planning this means that "spatial form" is subject to change in accordance with changing experience.* This has definite bearing upon the utilization of ecological thought for planning, being concerned with the organismic character and the changing elements of the community. *Walt Whitman's strong influence upon modern American thought and literature is undoubted, and Frank Lloyd Wright's numerous references to Whitman's philosophical poetry confirm its transition by way of his own architectural conception into the sphere of housing and community planning (Broadacre City). This simply reveals the pertinent character of philosophical*

⁴"Conversations of Goethe with Eckermann."

⁵Carrel, Alexis, "Man the Unknown."

thought. The power of philosophical speculation has always been behind social and cultural achievement and, therefore, deserves much greater attention in the present discussion on better housing and community planning.

Aesthetic emotion has been termed an act of interpretation which has found modified expression in the form of styles at different times in history. The 19th century in western civilization is the first without a "style." No doubt, there exists a relation between the acquisition of historic consciousness and the loss of stylistic expression during this period. This unique situation was accompanied by a general attitude of superficiality in thought which contrasts sharply with the former habit of penetrative thinking and functional participation in events of individual or community interest.

A newly awakened urge for scientific exploration of human potentialities has united physiological and psychological efforts to discover moral and aesthetic functions of the biological entity, man. Looking back, we find that the dynamic equilibrium which prevailed in the medieval city, with the church as social nucleus, was made possible through cultivation of the senses. *Applied to our present day problems of physical planning this means that we need a qualitative intensification of visual and aesthetic expression as background for all individual and group activities.*

Differentiation and interpretation are the psychological processes by which biological experience reaches the human level. The result is *definiteness* in abstract thought, which by historic evidence, has always been transformed into symbolic form of purely sensory impressions. True works of art like Greek or Gothic or Oriental architecture, painting, and sculpture are characteristic for such an "intellectual" approach.

The functional conception of psychology realizes continuous and interdependent processes between environment and organism. This gives not only the key for an understanding of human nature but furthermore it enables us to adopt measures for the *improvement of human behavior through psychological environment.*

In former days such action was achieved by artists whose comprehensive minds interpreted in a symbolical way contemporary spiritual and scientific thought. It seems obvious that the roles have changed somewhat in our era of specialized and much more detailed knowledge. *The psychologist could now fill the gap which was left wide open when the artist lost interest in his customary preoccupation with transcendental and scientific meditation and interpretation.*

Psychology with its educational and therapeutical deductions in regard to aesthetics aims at the evaluation of phenomena which relate to art and human conduct. It is the role of aesthetics to effect those adjustments which are necessary in order to attain equilibrium in mental affairs. This process is similar to the effects of common sensory experience upon the physical equilibrium. *But we must add that aesthetics without the filling contents of ethics are like empty vessels sailing on the lake of our intellectual production.*

Psychology tells us that interpretation, as derived from experience, results in *definiteness* by the process of differentiation. This, of course, is the opposite

of *vagueness*. The definiteness of a situation will strongly stimulate adjustment or action. Therefore distinct responses of the human organism can only be expected from clear pictures or definite situations; yet the biological function of aesthetic experience needs an act of imagination in order to grow into creative abstraction.

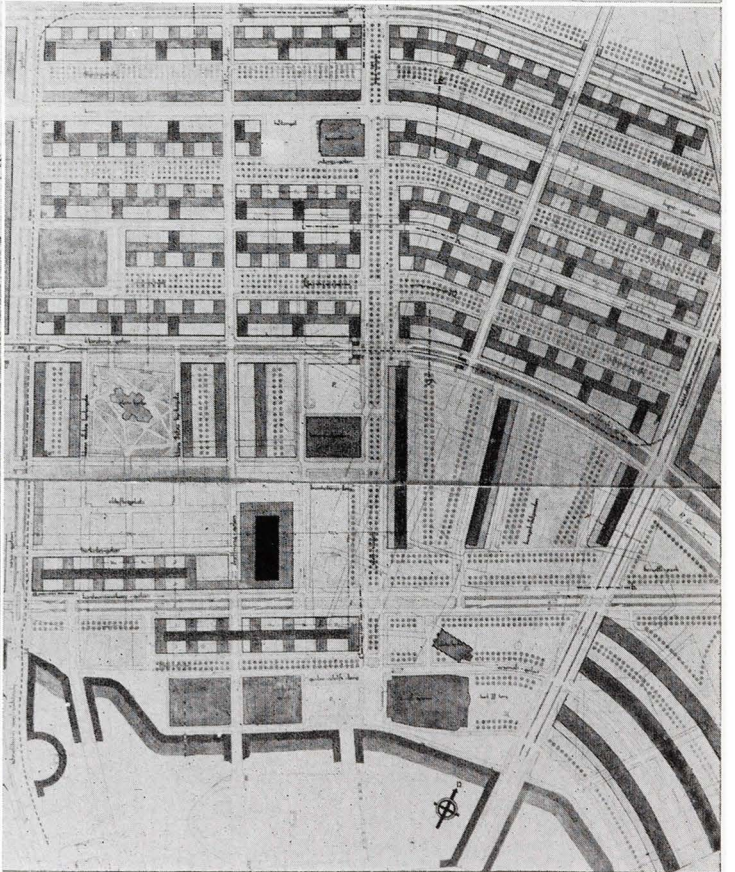
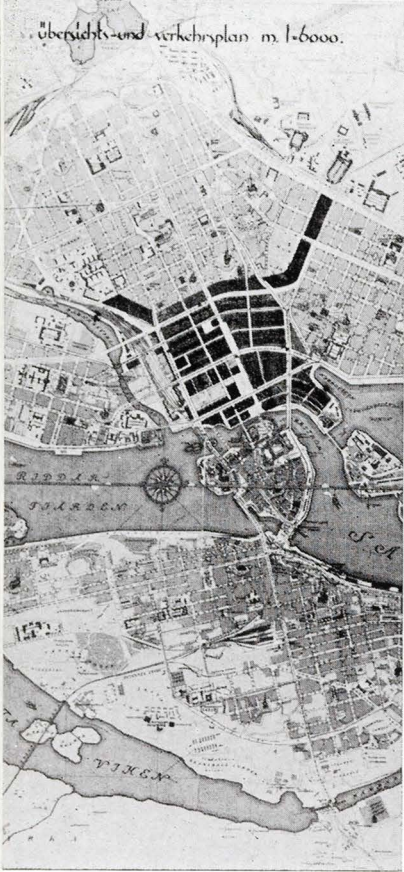
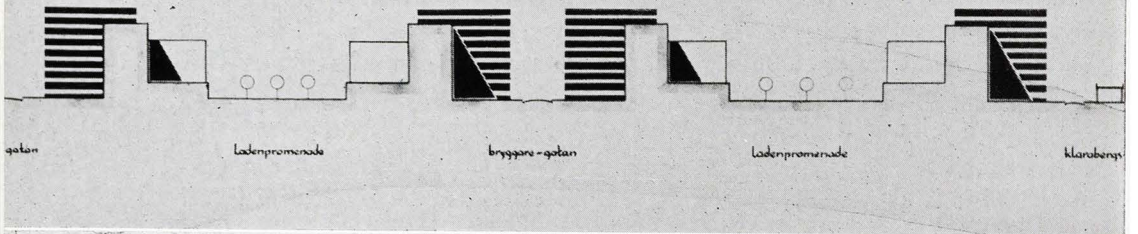
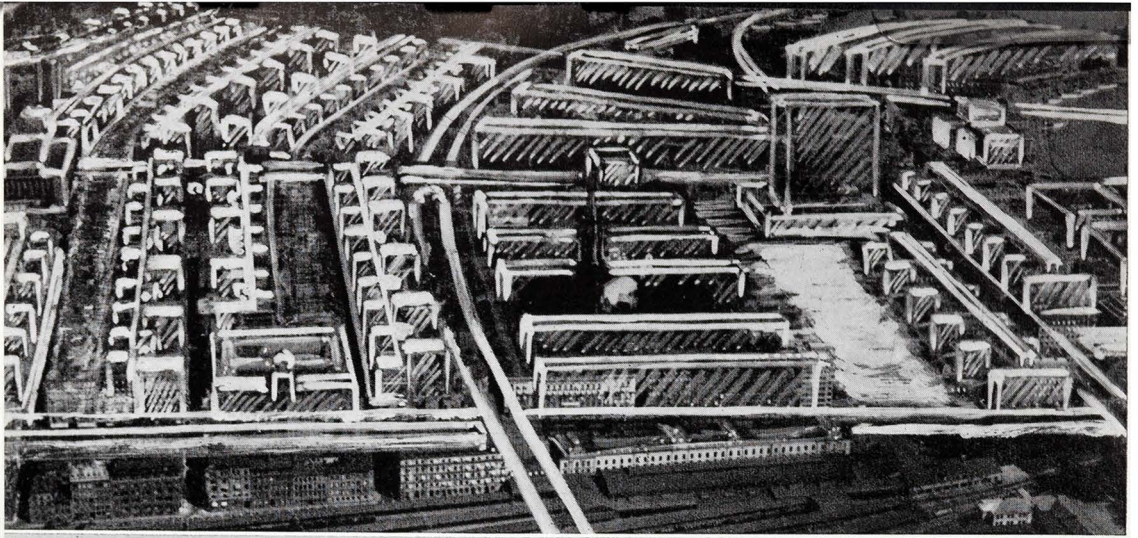
The meaning of this becomes clearer if we subject ourselves to the *emotional impact which the medieval town still exerts upon us even up to the present day. The definiteness with which aesthetic quality becomes here articulate is in sharp contrast to the lack of emotional stimulation in the modern city resulting from its unprecedented vagueness.*

John Dewey's contention is that "beauty as the total aesthetic quality of an experience"⁶ is achieved by harmony between form and content. Dewey's assertion that aesthetic experience will result in the good or that there is no principal difference between aesthetics and ethics, being part of everyday life, finds confirmation in Plato's approach where he discusses aesthetics as part of ethics, metaphysics, and politics.

Yet modern science attributes to form a purely physical character a conception which is shared by neither the traditional western nor the Oriental philosophy where form is rather synonymous with idea. *Spiritual values have played an outstanding role in aesthetics during the past.* This was abandoned in the wake of scientific progress which assigned to aesthetics an insignificant role which separated it entirely from the pulse of life.

Spiritual values are greatly suspected as unscientific by the modern planner who at the same time ignores the present lack of principles conducive to the formulation of human character in modern planning. The fact is that aesthetics is closely related to psychology and physiology, and therefore scientifically measurable. The former attitude of suspicion can no longer be considered justified and, therefore, *aesthetics must again be considered a functional part of planning.*

⁶Ames, Van Meter, "The Function and Value of Aesthetics," *The Journal of Aesthetics and Art Criticism*, The Philosophical Library, Spring, 1941.



"If function is comprehensible only from structure, the main lines of a structure are not to be discerned without some idea of its function."

—Henri Bergson

CHAPTER IV

LIVING STANDARDS OR STANDARDS OF LIVING? THE EQUILIBRIUM BETWEEN TECHNOLOGY, PHYSICAL AND SOCIAL SCIENCES

We recognize that sociological functions are primarily explained and acted upon through the medium of psychological interpretation, while biological processes represent organic and functional activities, which the physiologist and the biologist are called upon to investigate. *It is frequently pointed out that a great discrepancy exists between the vast knowledge and control of our objective world and the comparative ignorance of man's own subjective processes. Concerning the latter not even those biological realities and physiological experiences, which are objectively observed as qualitative and quantitative phenomena, have thus far been employed to the advantage of environmental improvement. Organic planning for the modern community, which represents man's social organism, must be based upon the growing knowledge of man's total organism and the functional order of his individual and social behavior.* It seems obvious that any policy for housing and community planning should have enough flexibility to permit the utilization of forthcoming scientific contributions.

Our main interest goes, therefore, to physiological psychology which attempts to explain human behavior in terms of the physiological mechanism. Emotional behavior subjected to experimental study, has shown definitely the effects of color and form on it. We must expect great changes in planning techniques from this scientific discovery which is already used empirically as therapeutic treatment in hospitals and sanitariums.

PLAN FOR THE REHABILITATION OF THE INNER-CITY OF STOCKHOLM, 1933 THE CITY OR SHOPPING PROMENADE

Complete segregation of pedestrian and traffic by a system of "City or Shopping Promenades." They form an uninterrupted and traffic-safe walking space. The public moves between two blocks of buildings, i.e., two shopfront sides designed exclusively for the pedestrian. Landscape treatment and other recreational facilities benefit shoppers and employees alike. Combined advantages of both the modern department store and the old bazaar street. Access from the parking areas using streets parallel to the promenade. A complete penetration of the inner city with green areas is attained.

Comb-shaped building layout and staggered zoning permit off-street parking and unloading within the building area for greater traffic safety. Promenades wide, boundaries of actual traffic lanes narrow except the express boulevards. These express boulevards with transition lanes, ramps, and clover leaves feed the business district and link scattered city sections, suburbs, residential areas, industries, and even through traffic since no by-pass parkway is advisable across the wide water lanes of the Fjord. The city airport is located adjacent to the railway station and main traffic arteries in the center of the business district with provisions for multi-level parking of vertically and horizontally landing private planes.

The rationalism of *therapeutic procedures*¹ is based on the recognition that mental disturbances cause ill health and also that physical interdependence exists between mental processes and organic functions of the human body. Since the days of Hippocrates medical science has recognized that disease can be explained by its cause. The application of hygienic measures and diet were gradually replaced by drugs, until the microscope and psychology brought medical science back once more to Hippocrates' "expectant methods" and his conviction that there is no greater help to the physician than the sick organism's reaction to the patient's own efforts. This shows the value of the gymnasium in ancient Greece where therapeutic treatment was offered for the sick.

The ancient notation that body and mind are interrelated has been recently verified by glandular psychology. According to psychological interpretation, we have found additional understanding of human behavior in the knowledge of the role which the central nervous system and the glandular process of internal secretions play in regard to bodily and mental functions.

Modern therapeutics aim at the restoration of organic efficiency by more or less indirect means so that the weakened body may be assisted towards recovery through coöperation of the still efficient organs. This holds true particularly for the ever increasing deficiency diseases, those minor forms of ill health growing out of modern artificial life conditions.

Mental hygiene must recognize the importance of form and color therapy which combined with aesthetics is an indispensable tool in the struggle for mental health. These aspects of mental hygiene lead to entirely new problems in formulating the modern community physique. This stands out distinctly as a separate issue against the preponderance of all technical phases in housing and communal city planning such as safety in traffic, public utilities, hygiene, building techniques, physical amenities, and comforts,—all of which the inventive genius is providing at a rapidly increasing rate.

It is obvious that a balanced "color and form environment" is mandatory not only in caring for the sick but also in supplying the "normally healthy" person with those indirect therapeutic means which psychiatry will consider necessary for the individual case. It will be made technically possible through a flexible scheme which can easily be derived from mass production methods.

There are already some few basic psychological studies available which deal with observations on color and form phenomena. The psychological research laboratory of Smith College among others has published a series of research results which indicate the many potent possibilities of this subject concerning its therapeutic utilization. We find studies² like "Psychology of Form," "New Studies in Transparency, Form, and Color," "Observations on Color Phenomena," "Studies of Mass Relationship and Figural Cohesion as Independent Factors in Color Change," "Form and Plane in Competition," "Competition of Colors and Contours," "Einfache Raumformen unter dem Einfluss Verschiedener Farbgebung." *These and other studies represent the beginnings*

¹Frazier, Francis Richard, "The Principles of Therapeutics," The Williams & Wilkins Co., Baltimore, Md., 1934.

²"Psychologische Forschung" and "Archiv für die Gesamte Psychologie," Akademische Verlagsgesellschaft, Leipzig.

of scientific investigation for a color and form therapy which must also reflect into the speculations of modern aesthetics.

Apart from pathological manifestations towards color we are also familiar with those of the subconscious mind in regard to phenomena of space. The quantitative-qualitative interrelationship of spatial sensation is explained by physics as a natural phenomenon. The reaction of this connotation upon a person within its influence has been termed a *subconscious spatial sensation which will result in some kind of corresponding emotional behavior*. Great potentialities of influencing the human mind are exhibited in this process and have been known and utilized by all former civilizations.

This is also obviously an important aspect in solving the modern problem of housing and community environment. It demands inclusion in any functional program of planning requirements. The contention that physical planning must be centered around the *basic* physical and mental needs of man has to be analyzed more extensively. It has been voiced by many critics who evidently have not taken pains to explain the full meaning of the word *basic*. We can take medicine, the most comprehensive of all sciences, as guide in our approach. Since medicine and arts and sciences of planning are focussed around the same objective "man," we may well be right in our assertion that Descartes in his "Discourse on Method" includes environmental planning as part of medicine. The modern institution of the social engineer confirms this conception somewhat. In any event, a proper knowledge of the living organism and its organismic and mental phenomena in their relations to the economic and social world are the prerequisites for progressive environmental planning.

In judging the characteristics of certain *decay symptoms in metropolitan life* the fact stands out that urban agglomerations provide a source for human experience in space relationships from which psychological reactions emanate in the forms of spatial emotion. This is known to stimulate strongly human behavior thereby influencing the social behavior pattern in one direction or another. *Created by man's imaginative efforts, the city as emotional phenomenon constitutes an attribute of gregariousness.* This aspect cannot be discounted in our present consideration.

The principles of modern mental hygiene, as we have seen before, are truly and functionally reflected in the medieval Gothic town. The gradual disintegration of the Gothic city which followed its climactic efficiency has been uncovered by the historians. Today, technical considerations like steadily accelerating speed in form of *fast moving transportation seem to ask for the adaptation of a new scale in space relations.* This new scale is thought to effect conformance of accelerated speed and the physical law of visual perception. This means that the sixteen picture per second capacity of the human eye must be fitted to a reciprocal speed in accordance with the desired clearness of perception of an object or panorama. As true as this deduction from physical science is we must doubt the necessity for its wholesale application to the scale relationship between modern transportation on the street and in the air and the aesthetic aspects in designing the physical structure of a modern community. The urge for adaptation of "human scale" seems incompatible

with the former demand, and yet it is feasible to arrive at a satisfactory solution by technically separating the two functions as has already been indicated in Henry Wright's plan of Radburn, New Jersey, 1929, the new "Master Plan for London," by the Mars Group, 1942, and the author's proposal³ for the rebuilding of Stockholm's business section in 1933, "The City Promenade."

The demands for a radical change in community planning conceptions emanate from many conjectural approaches of physical and social sciences alike. To create an equilibrium between the many divergent factors is not an easy task and it certainly cannot be successfully advanced by arbitrary and biased contributions.

The social and economic character of modern thought leads to another complex problem in the process of formulating planning principles. Economic science is thinking in terms of three cultures which act in accordance with the three basic activities: production, consumption, and distribution. Consequently the physical pattern of rural and urban communities at the three distinct stages in man's history is looked upon as a concrete derivation from such succession. According to this, production and consumption in their evolutionary course have created the changing historical parade of cities, towns, villages, and individual buildings.

Distribution represents a unique and new activity which is of a very problematic character. Based on scientific and technical potentialities like industry it is created by the utilization of mechanical elaboration. This development has so far resulted in different techniques for transportation by creating a mechanism of railway, air, highway, and other systems. But it has not yet resulted in a typical expression of its own.

Economic interpretation holds that distributive problems are the decisive aspects of modern physical planning. Communication is the chief function in this typical third stage of our civilization which is characterized by its distribution complex.

While the production phase has favored decentralization, the consumption phase is responsible for the tendency of centralization. The new problem of distribution is now providing the reasoning for a new pattern growing synonymously out of its peculiar character.

This economic conception furthermore registers a functional difference of regional and city cultures, which develops out of basically different economic and ecological factors. An environment should be provided for each type identical with its peculiar characteristics.

The social implications of economic evolution must be explained in terms of technology, politics, and sociology. The analytical mind of G. B. Shaw, in "Ruskin's Politics," put great emphasis upon the preponderance of economics in all human affairs. He compares Ruskin's development with his own in regard to this aspect. Both began with investigations of a purely artistic character only to find themselves in their later years "inevitably driven back

³See illustration, Plate III.

to economics, and to the conviction that your art could never come right whilst your economics were wrong."

Time and spatial relationships between individuals and populations have been studied and expressed as *ecological laws*. Climate, soil, and social development are brought into relation with the individual person's attitude, while coöperative impulses among other facts are responsible for factors like density of populations. Physical and social environment have a definite bearing upon social behavior whereby, for instance, the tendency of centralization in cities results in segregation if not balanced by appropriate planning. Social ecology has succeeded in explaining the organic growth of human settlements from the primitive phase on to present symptomatic signs of decay. Ecology has therefore opened the doors for a better appreciation of the psycho-social and cultural trends of sociology.

The psycho-social approach recognizes the process of interaction and inter-stimulation upon which successful group life is based and without which it disintegrates. Highest results, not only in efficiency and quality but also in individual satisfaction, are considered to result from "*constructive competition.*" Closely tied to the principles of *coöperation* such competition acts as morale builder and can best eliminate "destructive competition" with its many and detrimental conflict aspects. Again, this is nothing new as exemplified by Gothic coöperative competition starting in the 12th century A.D. with its grandiose cultural achievements. The Scandinavian countries, in recent times, have set the pace for modern successful procedures by instituting a broad and all inclusive population policy.

Eugenics has advanced new conceptions for the conservation as well as for *qualitative improvement of human resources.* This new avenue of scientific thought presents a coördination of genetic principles with those of sociology, biology, and psychology. One of its most interesting objectives, from the planning point of view, is *the demand for cultural quality.*

By subjecting human personality to the influence of progressively advanced educational and physical environment, the average quality of populations can be effectively raised. Research has given the eugenist sufficient material for shaping a policy which could mould desirable human characteristics. But we have also to consider that *the ability to respond* to a better environment is as important as the creation of the factors which make for it. It has been pointed out that bad environment acts unfavorably upon hereditary factors by affecting negatively the process of selection. This is more than serious since it may retard or even cancel any favorable development simply because response to better environment is not forthcoming.

While this scientific argument should prove sufficiently the necessity for better environment, there is *little effort made to show precisely the factors involved.* This fact represents a challenge to modern science which so far has merely scratched the surface of the educational phase in mental and physical environment. The preceding and following chapters attempt to relate

just that kind of available scientific knowledge which is relevant to such a new approach.

The psychologists declare that family backgrounds make up the major factors for the process of moulding mentality. Since eugenic selection is largely affected by favorable environment, it is not difficult to derive that environmental factors should be of such a nature which would promote psychological and physiological motives to rear a family. In other words, *the attainment of responsive attitudes towards progressive opportunities must be fostered through the integrated process of two different systems, general education and environmental planning. The kind of educational and physical environment which promises most for human betterment must become science's stimulating weapon of conditioning for Democracy.*

"The full measure of freedom Gothic Architecture did not gain until it was in the hands of the workmen of Europe, the guildsmen of the Free Cities. But from the first, the tendency was towards this freedom of hand and mind subordinated to the coöperative harmony, which made the freedom possible."

—William Morris

CHAPTER V

NO IDEALISM, NO IDEAL CITIES—A REALISTIC PROPOSAL

The aspect of *coöperative competition*, which has already been discussed, does not only find significant recognition as a sound principle in economic pursuits. It is an equally *stimulating factor in regard to all recreational and leisure time activities*. In other words, these associated life processes must also be subjected to the pressure of fundamental revaluation. Sociology and educational psychology as well as eugenics furnish evidence that a successful reorientation is not only necessary but also feasible. This means that principles for recreation are conceived by those sciences which must influence decisively the development of new *standards of living*. *This is another issue against which physical planning is obliged to respond actively.*

The academy of the early days in this country was an unstandardized institution designed to satisfy the maturing interests of older students. Based on the classical tradition, it was devoted to general education. This system may contain great potentialities for the present era of predominantly specialized education, especially under a new scheme which expects rightly everything from the *humanitarian approach, as contrasting with fascist ideologies, towards a mental and physical equilibrium*. The idea of sponsoring ungainful leisure time activities means to provide those educational facilities which are designed solely for the purpose of fostering a higher cultural level of individual life.

The art of life, which is according to the classical idea the greatest of all arts, demands high standards of living. If nothing else, the experience of a disintegrating human environment in the face of steadily rising living standards, particularly during the 19th century, has made it clear that the latter are not necessarily synonymous with high standards of living. Here again we must presume that *the preëminence of mental qualities in human affairs is still valid in the sense which Gothic man knew how to translate and express so ideally in his physical environment.*

Educational psychology must study an ancient practice which provided for active individual participation in any recreational or leisure time pursuit. This principle is recognized as the indispensable prerequisite for the success of any recreation policy presently suffering under the detrimental attitude of spectator-passivity.

The new conception of recreation, through coöperation and group competition, should utilize interrelated environmental stimulation. This would make its demands on physical planning in form of another group of principles.

Democracy as the only form of government which recognizes the scientific principle of evolution as the basis for human relationships *must express itself by a physical environment for its communities worthy of the great ideals it inspires*. The actual unsatisfactory status is not entirely the result of overspecialization or aloofness of science and technology as often implied. It originates primarily from an attitude of thinking which is, rightly or wrongly, derived from the mechanical character of our machine age. This seems to be one of the fallacies in history because the hard achievement of progress has furnished the means for detrimental human behavior. *Lack of adequate environmental conditioning during the period of transition from an unmechanized to a mechanized civilization prevented decisively the development of a well-balanced mentality*.

Modern technology is another step in man's history towards progress and greater human flexibility. As such it must be fully utilized for the formulation of new principles for housing and community planning. It is through the interpretation of history that we will arrive at a more conducive basis for such efforts. *The merging of philosophical, scientific, and technical thought is also required, before research and experimentation can start to supply production lines with a valid scheme for housing, road and highway systems, for recreation, hygiene, and work facilities—in short, for the community in town and country*.

Research has to make two kinds of contributions. In the first place, it must furnish the hypothetical matter of principles, and in the second, it must devise machinery and schemes for their effective execution. It is clear that no material plan can be expected from the first phase since this has to do with interpretation of problematical matters. The lack of emphasis on this preliminary phase of planning in the recent past has resulted in "formal planning." This method pays more attention to the collection of facts and data than to any kind of hypothesis which would give those activities direction.

We must confess that *positive principles for the physical planning of urban and rural environment are lacking*. Instead of this we have restrictive legislation which is mainly concerned with zoning regulations and amenity clauses, based on conventional classification devices. *The great opportunity* consists of the introduction of permissive legislation which recognizes experimentation by stimulation of originality, necessary for any progressive procedure in physical planning. As long as we continue to be satisfied with "normal standards" of planning the entire problem of human adjustment must remain handicapped.

Keeping historic evidence in mind we must agree that civic minded communities have responded very favorably to the coöperative method by utilizing and encouraging individual skills for the enhancement of their physical environment. It seems only logical that in our highly specialized machine age the process of planning communities should be a coördinated group effort which draws its ideas from the imagination and experience of laymen and specialized experts alike.

The stimulating power of competition should be considered not only as qualitative uplifter for individual members of a community but on a larger scale even for whole communities, regions, and countries.

Our Sport Olympics should be extended from the physical aspect to that of cultural competition. Art treasures of all centuries now hoarded away in the few national super-museums could be made useful and even more valuable as coveted prizes for such contests. These precious documents of our western cultural heritage would thus be gradually distributed to the most worthy communities. Priceless art creations of all ages would be put to a truly democratic and productive use.

The prize winning communities would receive additional economic benefits through tourist traffic which would result from such recognition of their successful efforts and from the concentration of past and present cultural achievements. The inauguration of contests should stimulate local potentialities including scientific research carried on at unbiased seats of higher learning. This old procedure involves innumerable possibilities; in fact, it seems the only feasible guarantee for inciting the creative genius to yield again abundant variety for a truly human environment out of local needs and functional requirements.

APPENDIX I

EDUCATION, PROFESSION, AND RESEARCH IN HOUSING AND COMMUNITY PLANNING¹

The arts and sciences of environmental planning were originally synonymous with the practice of architecture. For obvious reasons this fact has little more than historical significance. Modern environmental planning has as main objective to provide for the development of individual and community life in accordance with evolutionary principles. It distinguishes itself from previous methods of planning by the same characteristics as does astronomy from astrology, or modern medicine from ancient, supernatural temple-medicine. But no subject seems to invite more conjectural opinions than environmental planning. The ideas range from the adaptation of mere "common sense," as most frequently suggested, and "intuitive" methods to passionate indulgence in the production of scientific research data. As we know from experience, none of these methods will automatically result in satisfactory schemes for the planning and replanning of our 20th century environment. No results of deep significance may be expected unless we succeed in finding the procedure by which scientific research and specialization are brought under the control of "Principles" which have yet to be finally formulated.

We are inclined to ignore the abstract quality of the plan. Being a diagram it can never substitute the complete phenomenon which in the last analysis has to do with biological values with human life. The difficulty seems to consist in giving the main accent to active performance while recognizing the important yet not indispensable function of the plan for molding environmental factors. The first step in solving the problem must be the establishment and use of research as a "symptomatic process" for the formulation of principles upon which the whole structure of our future efforts depends. This reflects largely into educational problems and the discussion of planning curricula.

In view of the comprehensive character of planning, the undergraduate curriculum can well be supplied by the existing teaching program at most universities. Coördinative curricula, such as already in use, should be composed of as many elective subject-groups as are required for background training, in accordance with special requirements for the different planning fields.

The actual problem seems to arise from the need for a well defined graduate curriculum. *The difficulties and adverse circumstances to which modern planning is subjected reflect not only into the educational sphere but, as matters stand, are largely conditioned by it. Profession, School and Research belong together and must converge for the sake of progressive development.* Planning depends on the contributions of individual members of the profession as well as on coöperative efforts in the dual form of promotion and research.

¹Paper submitted at the inquiry of the National Resources Planning Board, Boston, Mass., June 1, 1942.

Excerpts quoted in "Education for Planners," N.R.P.B., Region One, Boston, Mass, 1942.

In breaking down the process of planning we arrive at four distinct groups, all of which contribute to the objective of planning, the project.

- 1) "Background-knowledge" of all related subject-matters. This is clearly a responsibility of the educational system, beginning with the undergraduate program but continuing as source of information in form of professional adult education.
- 2) "Research" and "Experimentation" as combined efforts. They should be directed and supervised by outstanding members of the profession and the graduate schools under some kind of orderly procedure as suggested for example by Alvar Aalto in his "Supervising Research University."
- 3) "Techniques" as the instrumental procedure by which action is taken. They belong into the realm of instruction partly on the undergraduate level but are in their essential substance a matter of graduate study in closest contact with the profession.
- 4) "Principles" to animate and guide the analytic efforts as stated under 2) as well as the synthetic ones under 3).

Planning is the process which results from an interpretation of all related subject-matters in the form of an abstraction of diagrammatic condensation. The magnitude in scale and the time element figure very prominently among the many elements which seem to be inconsistent with the rigid character of the diagrammatic plan. We may say that the four dimensional quality of the objective of planning is comparable with organic growth in nature and as such is subject to extreme flexibility and efficiency.

The Graduate Schools could greatly contribute to the common cause by instituting coördinative research as part of the curriculum. One or two years of office practice as prerequisite will guarantee sufficient grasp on the part of the student to fit into actual, supervised research work. This should acquaint him more deeply than anything else with the scientific requirements of planning procedures.

The question will have to be clarified what is more important, the acquisition of quantitative or qualitative knowledge. We have to make the choice between allopathic and homeopathic education as G. B. Shaw suggests. The first will tend to create a rather superficial outlook while the other may enable the student to deal more constructively and originally with any given problem in his particular field. Translated into terms of procuring professional planners, the latter method would constitute a first step towards the elimination of many pitfalls of planning which are responsible for the disintegration of urban and rural communities. The ever present danger of rigidity² in planning procedures seems to result from lack of understanding the fundamental laws of evolution which entail flexibility and efficiency.

This would mean to secure the highest professional skill and experience for instruction purposes. But it seems also dictated by the urgency of the problem and the noticeably small number of experienced and scientifically

²(See: *Survey Graphic*, February, 1942, "Why Dreary Housing Projects?" by Albert Mayer.)

creative practitioners who can be mustered for the gigantic task of planning and replanning our modern civilization.

Research being the key to modern planning and yet its most neglected part opens wide fields of activity in excess to established branches like sociology and technology. We must realize how little use has been made thus far of the existing and forthcoming research in biology, physiology or psychology. These latter sciences take on particular importance in a rapidly progressing building technology intended to produce any kind of structural form by assembly line prefabrication methods, under utilization of new industrial processes such as synthetic plastics of different kinds. Environmental physiology, educational psychology, social and human ecology, eugenics and other sciences will have to make decisive contributions to the planning of a more satisfactory modern environment by providing the answers which in past centuries were given by the artistic genius.

I agree that "we must credit students with some ability to coördinate what they learn, and with considerable seriousness of purpose."³ Youth must be trusted to accomplish things, but there must also be sufficient inducement to incite enthusiasm. One inducement of great magnetic power is competition for the purpose of obtaining by selective methods the most suitable solution for planning projects in town and country. This method not only stimulates professional quality but offers also great possibility for participation of graduate students on the basis of supervised coöperative work. The objection of "economic waste" as the by-product of such a procedure must be discarded on the grounds that no price can possibly be too high, if we succeed thereby in obtaining highest quality for our physical environment. This will represent a cultural achievement which cannot be measured in economic values alone, since its effects are subject to comparison with former periods in history which have set the standards for human perfection.

³Morrison, Hugh S., in "Education for Planners," National Resources Planning Board, Region One, 1942.

"This is the grandeur of Nature that she is so simple and that she always repeats her greatest phenomena on a small scale."

—Johann Wolfgang Goethe

APPENDIX II

FLEXIBILITY AND EFFICIENCY IN HOUSING AND COMMUNITY PLANNING¹

There are many pressing problems which urban and rural communities have to solve—and that means to solve instantly—under the tremendous impact of total industrialization for the all-out war effort. It is only natural that those people who are immediately concerned with the problem expect a good and quick answer, a remedy from the ones who—as they think—ought to know. This is almost the situation of the man who desperately needs a cure for cancer. But instead he is told that millions of dollars are continuously spent for research and many new hospitals all of which, in the end, will give the means for treating him successfully—if he is still alive.

Speaking figuratively, the diagnosis of our cities and towns is a cancer; the diagnosis of our rural communities is deficiency. There is only one slight difference in the comparison. While much attention is being paid by the medical profession to the problem of cancer, tremendous funds are being raised to get the pending, final answer, nothing much by way of comparison, is done in regard to our problem of urban and rural rehabilitation.

The British who have been keenly aware, over the last five decades, of their responsibilities towards environmental planning, are now taking pains to improve their former approach, despite the fact that they are "on the spot." Their visualization of a "better Britain" has shaped a policy for such an undertaking. They realize that much of "what the after war time will be is being created now during the war." Two new ministries, that of Building and that of Planning, are combining their efforts with several study groups such as the 1940 Council to Promote the Planning of Social Environment, the Association for Planning and Regional Reconstruction, the Town Planning Institute, the Housing Center, the Garden Cities and Town Planning Association, the Architecture Science Group, the Leverhulme Trust Community Centers Committee and others as for instance, the British Association for the Advancement of Science.

The outstanding feature in this setup is *not* the idea of applying scientific methods to planning efforts embracing economics, sociology, planning and design, education and coördination. Significant, and therefore worth mentioning, is the fact that this *far-sighted policy does not aim at any actual plan at all*—be it for London, Coventry, or even the whole country. *The work consists of finding the issues involved and devising methods and machinery to cope with them.*

¹Paper read to the American Association of Scientific Workers, Austin Branch, April 29, 1942, Austin, Texas. Information: Journal Royal Inst. of British Architects, London.

Especially the 1940 Council to Promote the Planning of Social Environment has done a great work in establishing a program of regional research which is primarily based on nine conclusions of the Royal Commission on the Geographical Distribution of the Industrial Population. In this connection we may recollect that even before the war started, Great Britain had already decentralized many of her industries from congested areas to as far away as Scotland. Although this was mainly done with the view of relieving depression periods before the war, by introducing part-time farming for industrial workers, this decentralization has greatly assisted the evacuation schemes during the present war.

Here in the United States the far-sighted planning policy of the State of Tennessee must be cited as an example of real efficiency. A twenty-five year effort, greatly enhanced by the TVA project, has now come into its own by utilizing war emergency activities to accelerate community planning. There are already more than 100 private, governmental and commercial agencies in the United States preoccupied with post-war planning, mainly of an economic character. The greatest obstacle to any such planning is the factor of uncertainty, regarding the prevailing situation after the war. But we may agree that post-war urban and rural rehabilitation is of primary importance in *any* scheme in the future.

It is necessary to emphasize some of the basic elements of which the complex problem is composed, in order to stimulate the respective scientific workers to take active part in such a gigantic problem as the rehabilitation program represents.

The Green Belt Towns visualize the latest scientific experimentation in planning in the United States—at least such of a basic character. In order to appreciate this assertion fully, we must remember the origins of the Garden City Movement. In 1898, the Englishman, Ebenezer Howard published his theories which led to well known Garden City developments, as among others, those of Welwyn and Letchworth, representing the principles which are laid down in his "Three Magnets," known as the interwoven pattern of town and country.

Out of those first conceptions of planning for a mechanized and industrialized world developed the beginnings of a "Planning Science." Different countries have taken part in it by furnishing more or less sporadic contributions. But the British have thus far made the greatest strides in the form of a scheme referred to as "Geoproscopy," from which many derivations have resulted. A distinction is made between planning practice and planning theory. It is also subscribed therein to "two important mental processes constituting planning: first, the analytic activity of ascertaining an understanding what is; and second, the synthetic, creative activity of stating what shall be."

Modern geography is considered of first importance to planning which places it in direct contact with social life. This principle is of particular interest to efforts in the United States where the new science of regionalism takes into

account the extreme contrasts of the various parts of the continent. "Geoprosopy" is based on a scientific foundation which is supported by social sciences, geography, and technical sciences.

As systematic as this approach towards a planning science is compared with the many unsystematic attempts, there still remains much to be done in order to have a complete picture of the whole problem. Thus far very little use has been made of the research results in other fields such as physiology, psychology, and biology. These latter sciences take on particular importance under a rapidly progressing building technology intended to produce any kind of structural form on assembly line prefabrication.

The existing standards of construction and planning must be fundamentally modified in accordance with the new scientific approach. Modern science has already changed our living habits considerably in many ways. Modern nutritional conceptions are responsible among other things for the "cafeteria." Everyone will agree that the new nutritional approach represents a fundamental departure from former methods and habits, by introducing the principle of active participation in form of individual choice according to individual differences.

By carrying over this idea to Housing, we can only partially realize what mass production may mean, especially, under utilization of new industrial processes such as synthetic plastics of different kinds. In housing as well as in nutrition, the utilization of mechanized methods for production and distribution will do much for individual emancipation.

But this can only happen if modern scientific conceptions are applied. Present and future results of research in the fields of physiology, psychology, biology, human and social geography, ecology, eugenics, and others will have to make decisive contributions to the scheme of environmental planning. Environmental physiology and psycho-physiology, must be considered and advanced in order to derive applications which would make for genuinely satisfactory modern environment. The study of emotional values and reactions is important as far as our perception of form and color is concerned because they must necessarily be reflected into the design of individual house units, and their distribution and arrangement in the community setup. This in turn will determine the planning of organic communication lines, transportation systems, recreation and hygienic facilities, educational requirements and other items.

This will not only free us entirely from "standard" conceptions, like cubistic forms, but it will also make it possible to voice our preference for shape and color of the spatial enclosure in accordance with our individual needs. This will eliminate once and for all the drabness and monotony of our housing schemes and will result in a variety of formalistic expression on the inside and outside of our buildings, competing with medieval vigor of expression.

It is rather tempting for the imagination to elaborate further on that theme even to the point where it can be fitted into the aspect of therapeutic treatment.

In the last analysis we may face the situation whereby the prospective house owner will consult his medical adviser before seeing an architect. The flexibility of prefabricated house units will then permit the architect to translate the "doctor's prescription" into differently shaped walls and ceilings to be covered with a particular color. This will counteract and counterbalance, as therapeutic treatment, many physical and mental deficiencies which modern man acquires in a modern world.

Sociological problems are investigated and treated by psychology which has also explained much of the organism's behavior by experimentation. We have thereby learned about the role of the environmental stimulus. Physiology has explained much of the organ functions and physiological psychology is experimenting with studies which are designed to establish fundamental principles of emotional behavior under the influence of form and color, in so far as our problem is concerned.

The photo-electric spectro-photometer registers millions of color shades and it will not be long before this will be utilized for color therapy which until now is largely based on empirical knowledge and is, as such, applied in hospitals and sanitariums. Also the pathological manifestations of the phenomenon "space" are known but described as unconscious. These are fields where science could make invaluable contributions to environmental planning by providing the answers which in past centuries were given by the artist.

We pay very little attention to the fact that "space" represents a medium in which we move about. It presents itself as a room, a street, a square, a forest, a crowd, or any other space which we perceive from "inside." Its characteristic appearance is that of three dimensionality and it comes to our attention by means of the presence or lack of aesthetic proportions in home, church, stadium, assembly hall, factory, passage, avenue, tunnel, etc.

The aesthetic emotion which may be experienced by space perception must be classified as a psychological effect. Therefore, its inclusion in the program of functional requirements for our physical housing and community environment is paramount. This approach fits well into the aspects of a great experiment which has started in America. It is the attempt to improve man by improving his environment. It is borne out by the demonstrations of eugenics that environment is responsible for the molding of human characteristics and since the conservation of human resources is of primary importance not only quantitatively but also qualitatively, the educational—psychological function of environmental factors is obvious. Social ecology has shown us the organic order for functional community planning, the functional entity may be the agricultural village, the industrial community or the metropolitan super-community.

Should populations be concentrated or decentralized? We have suggestions which go to the extremes of advocating a population density of one person to the acre (Frank Lloyd Wright) or 400 persons to the acre (Le Corbusier)! Such questions require "realistic" solutions. They have to be settled on the basis of scientific principles. Today, we should be in a much better position

to improve our physical environment than medieval man who solved the problem in such a successful manner.

Planning should be centered around technology and science and should be gauged by two main attributes: *efficiency* and *flexibility*. These two words are only generalizations but their true meaning points decidedly towards developments in planning of extraordinary scope. First of all, we shall have to determine what the true issues involved are and what actually makes for the achievement of efficiency and flexibility.

To visualize the end product before thinking in terms of the necessary or possible technique for its accomplishment, is as dangerous as it is customary because any successful approach involves "vision," a human quality of undetermined character. Its pseudo-existence has led to the contemporary passion for criticism in preference to active experimentation and research which constitute the only practical contribution to progress.

The future city may be compared with the invisible performer behind the radio screen. We can hear his voice without being able to see him. Once confronted with his visual personality, we realize our own imaginative shortcomings. The abstract qualities of speech, comparable to the problematic character of a plan, can never substitute the complete phenomenon of human thought and action. But both—speech and plan—have undoubtedly their important place in molding and influencing environmental factors. Therefore, the main accent must be given to performance itself. This will necessitate a revision of our attitude from that of a criticizing onlooker to that of an active participant.

The use and application of continuous research, as a symptomatic process, for the formulation of principles of Housing and Community Planning will greatly relieve the present situation of unscientific dealings with emergencies.

PROPOSAL FOR A LONG-RANGE RESEARCH PROGRAM

TO BENEFIT THE TASK OF HOUSING AND PLANNING THE RURAL AND URBAN COMMUNITIES AFTER THE WAR

Evolutionary changes in man's mental and physical existence demand the logical application of modern scientific conceptions to the housing and physical planning of rural and urban communities.

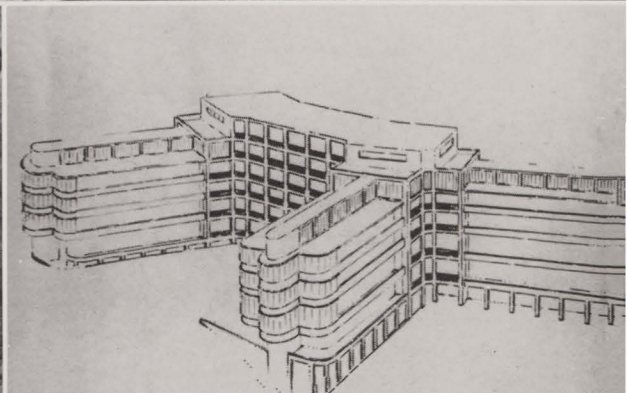
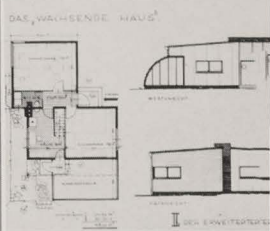
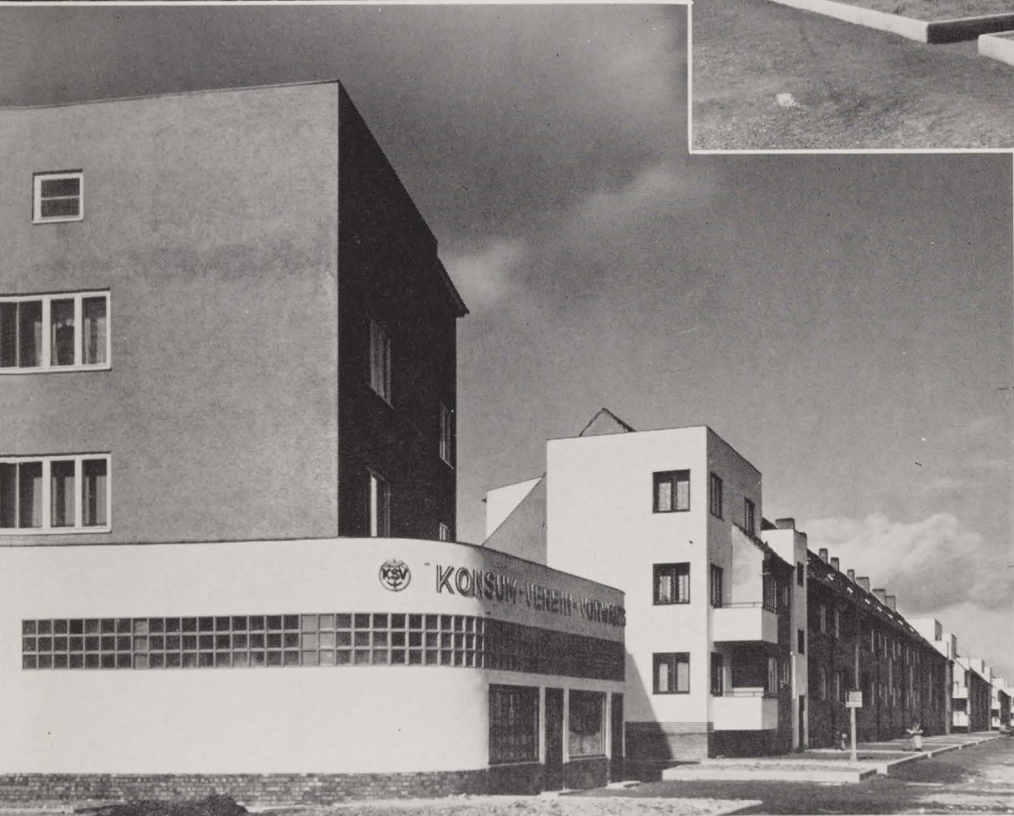
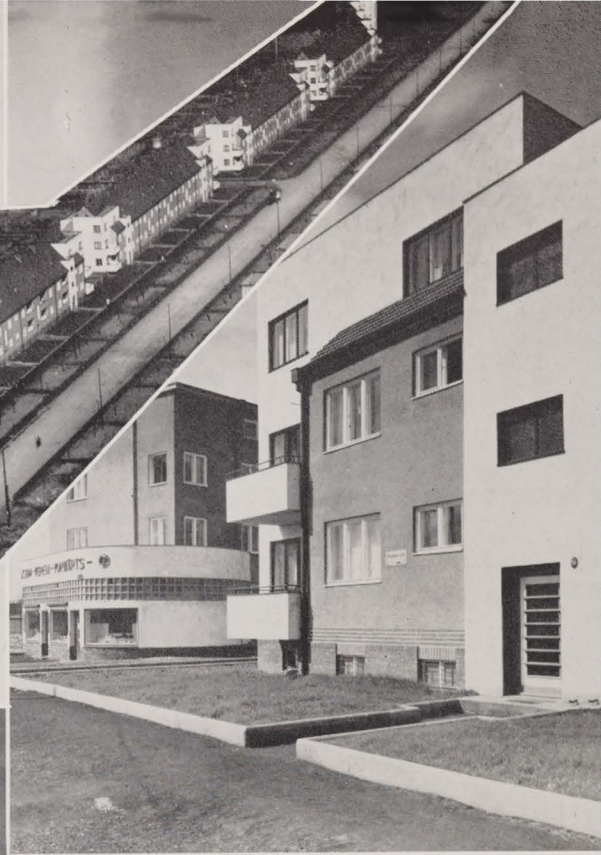
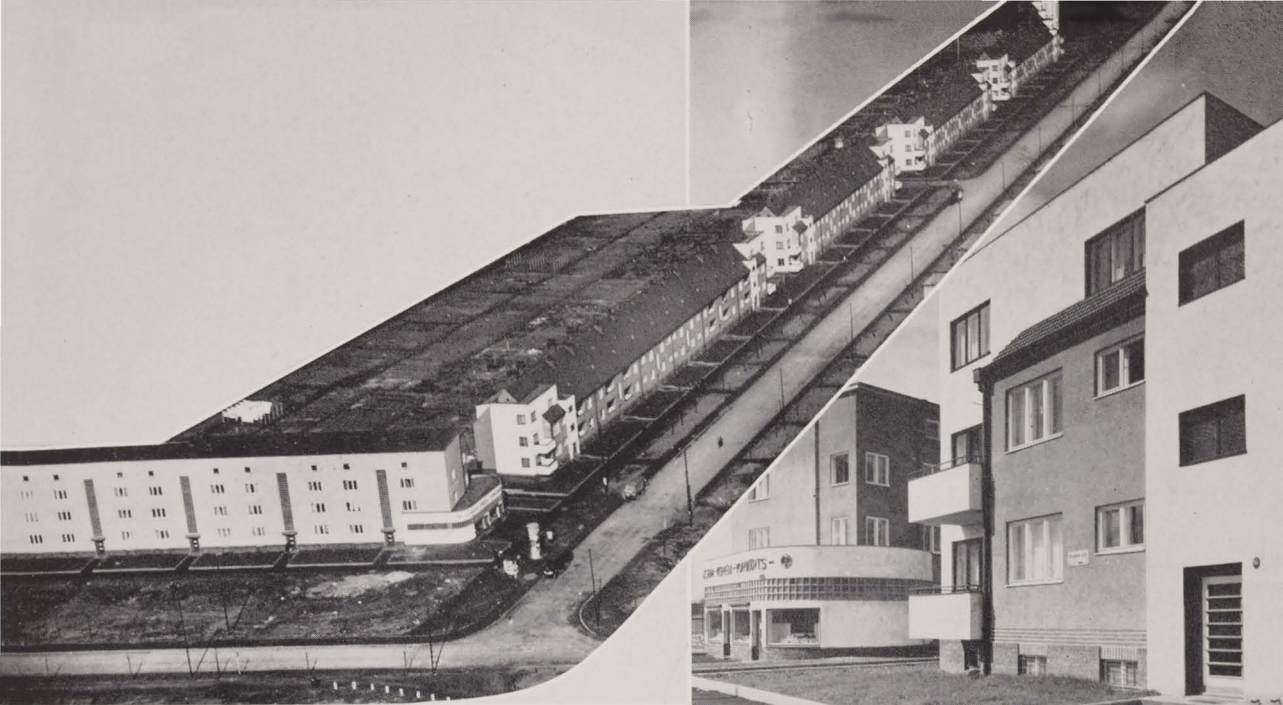
Modern medical treatment and nutrition among other subjects represent the result of coördinated scientific research and its translation into action. *It seems also not only logical but even mandatory to examine those interactions of human life which pertain to the physical setup of our rural and urban communities.*

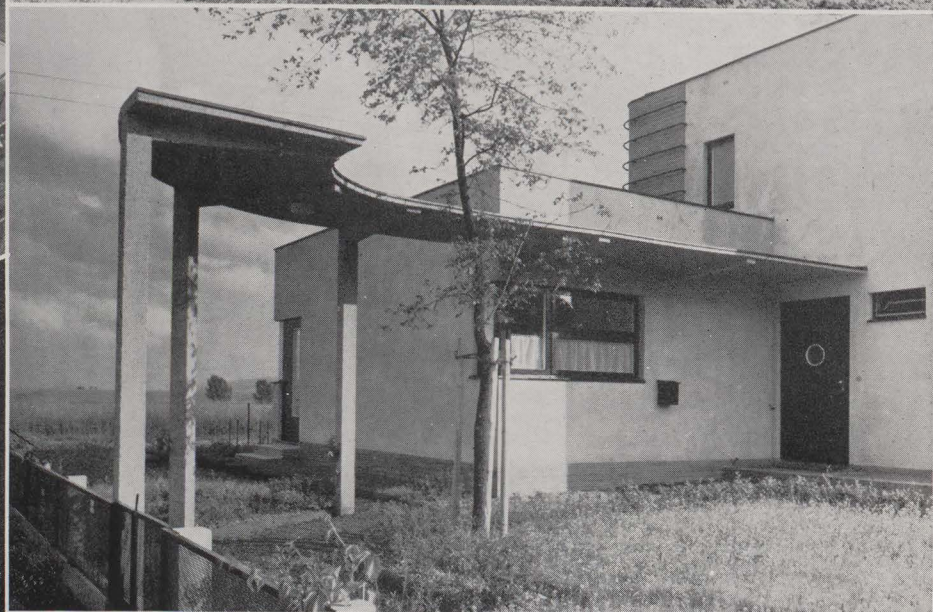
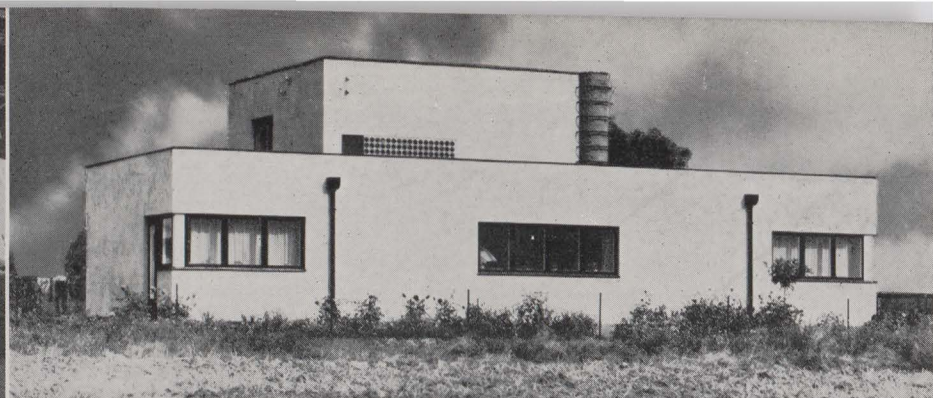
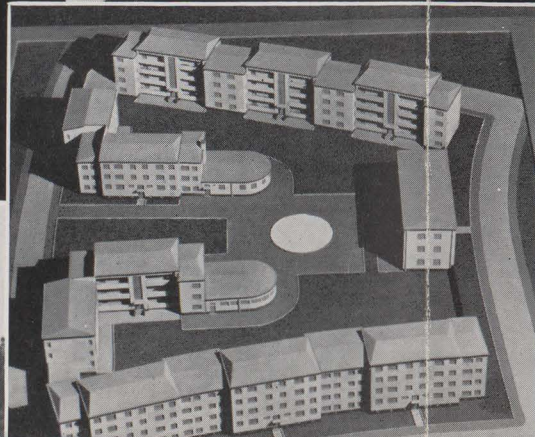
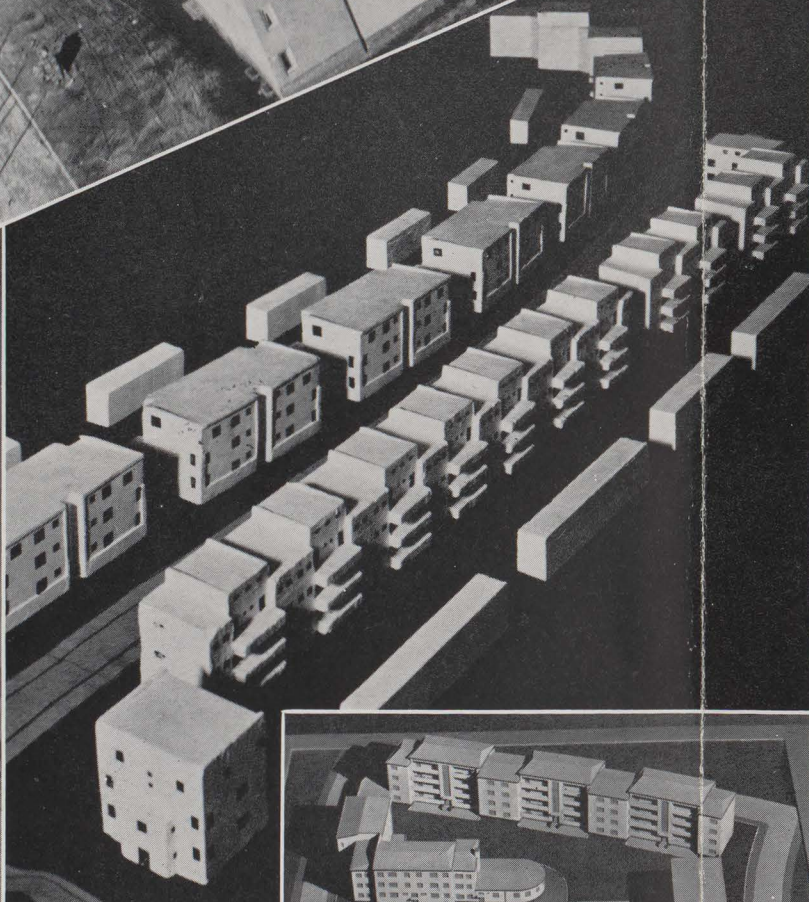
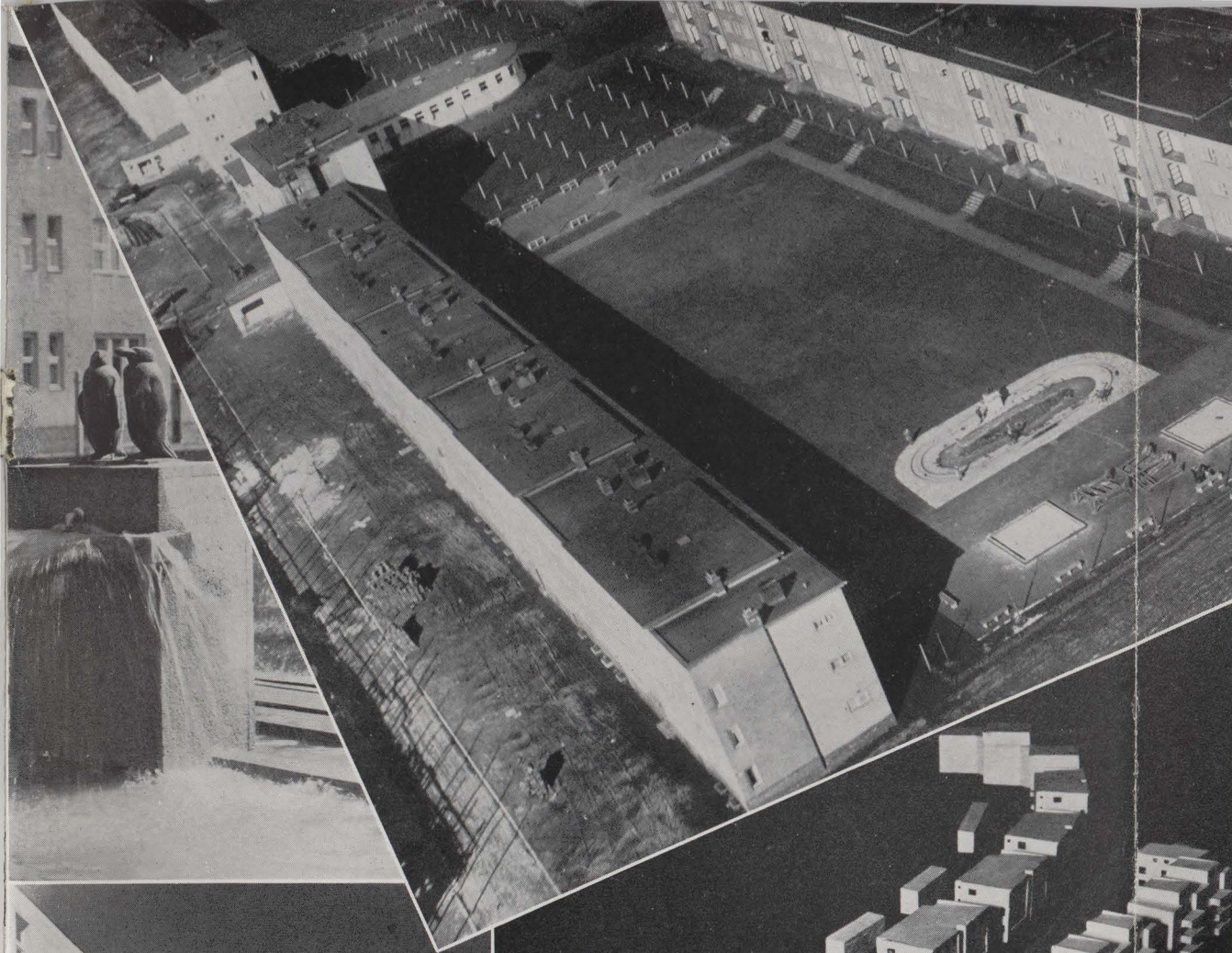
So far, little attention has been paid to subjects like physiology, psychology, biology, human and social geography, ecology and regionalism which have to make decisive contributions to the scheme of environmental planning such as housing and city planning. Environmental physiology, psycho-physiology (the study of emotional values and reactions inherent in form and color) and other relevant factors must be considered and translated in order to arrive at those planning functions which are the prerequisite for satisfactory modern environment. This must be viewed under assembly mass production for building and housing by utilizing plastics and other new techniques.

"The sensation of space" or "the perception of a spatial order" such as presented, for example, in "built" environment or architecture should be looked upon and treated as a "natural phenomenon" and not only as the result of "intuition." This process would then be open to scientific approach similar to the aspect of nutrition.

It is felt that this urgent and basic problem should be attacked at once in order to arrive at a *program for the deeper study of fundamental laws*. Only after this has been established to a certain degree the factors of economical, technical, and administrative concern should enter the process.

All indications show that the outcome of such research will necessitate the reevaluation of presently accepted "basic standards" of many elements composing the activities of housing and planning the rural and urban communities.





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