Evolving Priorities in Architecture and Urban Design: A Survey of World's Fairs

James L. Marshall, Jr.

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THE PURPOSE OF THIS THESIS

1. Survey the historical origins of the events that became known as world's fairs.

2. Analyze the evolution of these international expositions as large scale environments that manifest changes in professional responses to cultural forces in organizing aspects of the built environment.
ABSTRACT

EVOLVING PRIORITIES IN ARCHITECTURE AND URBAN DESIGN:
A SURVEY OF WORLD'S FAIRS

by

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The world's fair or international exposition of the nineteenth and twentieth centuries represents an interesting area in the context of large scale building enterprises. The fair in a sense has come to symbolize the best and the worse of a period in terms of design and usually is developed on a grand scale that cannot be ignored.

By analyzing different scales and types of built form, professionals can begin to develop a sound approach to design based on the possibilities and contributions that these complexes have to offer to large scale urbanism.

There are certain inherent characteristics particular to fairs that have potential "feed-forward" value for architecture and planning, but for our purposes they should be taken in an evolutionary, comparative way, as indicators of professional attitudes towards organization of the built environment. As such, these fairs illustrate "evolving priorities" towards problems of the impact of the accelerated urbanization.

There can be no direct comparisons of fairs and cities, although in the design and planning of a fair many problems that face the planner or the urban environment must be tackled and solved to make an amenable place for people. Essentially there are certain aspects of fairs that have far ranging significance beyond mere amusement and entertainment.

The world's fair is a phenomenon of planning and design that is unique in many respects; it is both real and fantasy and it is both per-
manent and temporary. It is because of this complex nature of the fair as a cultural institution that I have chosen to investigate it as a significant feature of the designed environment based on an act of will to be executed at a point in time without the usual restraints of everyday building.
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A Survey of World's Fairs

Introduction

Part I. Evolution of The Fair As An Institution

Origins of The Fair

Early Fairs

Mediaeval Fairs

French National Exhibitions

Nineteenth Century World's Fairs and Beyond

Part II. Analysis of Selected Fairs

Determination of Factors

Fairs Selected

Survey of Selected Fairs

1. "The Great Exhibition"
   London International Exhibition 1851

2. "The World's Columbian Exposition"
   Chicago World's Fair 1893

3. "Building The World of Tomorrow"
   New York World's Fair 1933

4. "The Festival of Britain"
   London National Exhibition 1951

5. "The Swiss National Exhibition"
   Lausanne National Exhibition 1964

6. "Man and His World" (Expo 67)
   Montreal World Exposition 1967

7. "Progress and Harmony For Mankind" (Expo '70)
   Osaka World Exposition 1970

Essence and Implications

1. "The Great Exhibition"
   London International Exhibition 1851

2. "The World's Columbian Exposition"
   Chicago World's Fair 1893

3. "Building The World of Tomorrow"
   New York World's Fair 1939

4. "The Festival of Britain"
   London National Exhibition 1951
Part III. The Proposed Bicentennial Commemoration at Philadelphia 1976

Background

Inception and Development

Plan For Planning

Environmental Considerations
1. Site Proposals
2. Urban Design Proposals

An Appraisal

References

Bibliography

Appendix
This Thesis is Dedicated,
To my wife Carolyn and my daughter Joy for their untiring devotion,
loyalty and patience.
INTRODUCTION

As the demand for totally designed environments increases, such as new towns, major urban re-development projects and large institutions, we must be able as designers to better evaluate and understand the influences that affect the nature of fully designed environments as acts of human will, beyond the scope of physical determinism.

As cultural priorities continue to shift major focuses of emphasis and attitudes, the architect/planner must be able to somehow embody the "positive" aspects of spiritual and technological transformations into the design process and ultimately the phenomenal world of the built environment as artifact.

John McKale in discussing the impact of technological change on urbanization states that, "The central point about the relationship between technologies and the future city is that we now have the physical technology to make any kind of city we desire. The 'urban problem' is no longer technical but social and cultural...The city is no longer the lodestone for earning a living when dispersed production, distribution and marketing no longer requires large labour pool concentration as did the nineteenth century industrial city." He therefore, argues for new specialized urban forms so we can best accommodate "the full range of human idiosyncratic requirements."

The dynamics of constantly evolving cultural priorities represents a continuing challenge to the designer, and the integration of social and physical change into the designed environment turns out to be a process of re-invention based on the impact of these changes.

In this regard, this thesis undertakes a survey and analysis of selected world's fairs. It will examine them as an aspect of man's
built environment and as a manifestation of the priorities and concerns of professionals toward the creation of a cultural milieu at a given point in time.

Shad Woods has said that, "in other words, urbanism concerns itself with all manifestations of a society insofar as they create or modify the environment." Through the examination of the fair as an institution, we can look at the task of the architect and architecture in situations which are composed in particular ways and which explicitly or implicitly pose particular questions.

The situations are for instance made up of economic, political and social conditions, of cultural traditions, of physical conditions; and not the least of human beings who "see" the environment in very different ways. Sibyl Moholy-Nagy said, "...man's reaction to his environment is largely arational, determined by purely emotional identifications with religion, wealth, education, art amusement, charity, and family life."

The logical response to these purely human ingredients that make the city is their constantly evolving historic genesis. These situations are not static, but always changing: the political organization of the society changes, the economic conjunctures oscillate, and the climate hardly offers constant conditions; and these fluctuations are always more submitted to human predictions and controls.

In general we may say that architecture and planning are human products which order and improve our relations with the environment, and also define the specific phenomenal environment into a cultural statement. This aspect of human existence has provided the dynamics of change in the creation of environmental artifacts based on the continuous regrouping of ideas and matter to produce the physical organization of social space.
as interpreted by man in different historical situations.

It is therefore necessary to investigate how human products are brought forth. Therefore we should ask; what purpose has architecture as a human product? The functional-practical and the milieu-creating symbolic aspect both constitute two possible answers to the question, both of which have to be investigated more closely, and which should, if necessary, be supplemented with other factors. The history of architecture here offers very inspiring material which shows that buildings from the most different periods have gone beyond the fulfilling of mere practical needs, the Gothic Cathedral being a case in point. They were built to depict the "real image" of the City of God, "the Heavenly Jerusalem, which they were privileged to build on earth." All objects are given with value, and the values therefore form a part of the phenomenal structure of the world.

Gregor Paulson's distinction between "physical-milieu" and "symbol-milieu" is basic. A building only reveals its full meaning when seen as part of a "symbol-milieu," where all objects carry values as participants in human actions which are never indifferent. The more than physical aspects of an artifact is closely related to societal myths as in the case of "primitive" cultures where all artifacts are representational in nature. In "civilized" societies where there have developed a cult of rationality and efficiency toward design, the symbolic aspect has also made itself apparent. In looking at the fair in an evolutionary context, both as artifact and institution, we can see how each fair dealt with is a result of psychological, social and cultural attitudes towards environment. It has been stated that the social condition which most influences design is that men discover new methods and materials because they are looking for a new freedom expressive of their "times."
PART I. EVOLUTION OF THE FAIR AS AN INSTITUTION
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ORIGINS OF THE FAIR

The origins of the contemporary world's fair can be traced back to man's early development as a trader, and therefore, the fair as a social institution is as ancient as man's attempt to barter his surplus or to display his goods.

Unorganized trade became a major activity in the lives of early man; and as men were able to overcome the irregularities of nature, permanent settlements were made, cities were built, and man was thus able to develop sizeable surpluses of goods and specialization of labor. Surpluses and specialization, in turn gave rise to a supply of marketable products which led to the development of trade between individuals, than between groups, cities, and eventually between countries and continents.

Before currency was known as a medium of exchange, and before the practice of business credit had been established, people gathered together at predetermined times and places to exchange their wares. The bazaar and the market day drew from the local area, while the fair was attended by people from much greater distances, and was held less often. From this aspect of the ancient trading days come the definition of the fair as a "parasitic town," existing intermittently, periodically superimposed upon a permanent town, for the needs of the itinerant commerce of the region in its entirety.

EARLY FAIRS

The fair itself could have evolved from many different sources, each connoting a somewhat different set of circumstances: in French, the word is "foire" from the Latin forum, a market-place or feria holidays; the German word "Messe" is also significant, as being a word employed to
denote the most solemn part of the church service, the mass (Latin missa). 2

Many of the earliest fairs of Greece and Rome were linked to athletic displays honoring newly dead heroes; the Greek Olympics began in this fashion. During this period in Greek history, wherever large assemblies of people took place for political or religious purposes, the situation was taken advantage of, by capitalizing on the traffic to have a fair.

In ancient Rome, fairs were instituted to allow country people to come into town every ninth day (numinac) to hear laws proclaimed; or the decrees of the people delivered and for the transaction of other public business. 3 These fairs were frequently held in the public streets, with booths, tents, and wooden stands for shows set up to accommodate the trade. The carnival air which we associate with fairs (the jugglers, tumblers, fortune tellers); goes back at least to Roman times, when sword swallowers, fire eaters, magicians, stilt-walkers and trapeze artists enticed great crowds in the streets of Rome.

It has been generally admitted that the Romans introduced the practice of the holding of fairs in northern Europe, to encourage trade with their conquered provinces, and as a subtle aid to the legion in the spreading of "Pax Romana". When the empire disintegrated late in the 5th century, virtually all commerce ceased until the 7th century when the Emperor Charles the Great (Charlemagne) of Germany began to revitalize the Roman tradition of holding fairs. Therefore, commercial interchange began to grow under the aegis and encouragement of Charlemagne, who promoted the holding of markets everywhere in his domain.
MEDIAEVAL FAIRS

The mediaeval trade fairs were important in the revival of commerce, intellectual life, and political stability in Europe, and since fairs brought some wealth to the areas where they flourished, petty rulers, competed as hosts by offering legal protection or tax exemptions to traders and visitors. Later, as territorial units became larger and the power of the state greater, princes promoted fairs for political purposes.

The first "fayre" in England was brought back by the Crusaders who saw the exotic, thriving Eastern bazaars and observed people gathering for religious observances with great exchange of goods and revelry at the same time.

One of the earliest fairs in France and one of the most popular was the Fair of St. Denis, which was chartered as a mercantile fair in the seventh century. The religious wars of the sixteenth century destroyed French supremacy and Germany took the lead. During this period, Russian fairs steadily grew in importance, and at Nijni-Novgorod in Russia, grew up the greatest commodity fair ever held.

FRENCH NATIONAL EXHIBITIONS

In the early eighteenth century, a new kind of exhibition came into being in Paris; this was the public art show sponsored frequently by Louis XIV and staged by his Academie des Beaux-Arts. The "salons", as they came to be called, were annual affairs by the end of the century.

In 1797, the French national warehouses of Gobelin, Sierves, and Savonnerie, were overstocked because of the English blockade of the continent; therefore, the commissioner in charge of these factories received permission from the Minister of the Interior, Francois de Neufchateau, to hold a public display of these goods. This sales promotion worked well,
and a similar bazaar was held the next year. These sales-cum-entertainment were successful and popular, and Neufchâteau quickly planned a much larger exhibit that would benefit French industry generally. This exhibition was held September 17-21, 1798, there were just a small number of exhibitors, but the exhibition was significant in several ways; the products of industry had never before received honors usually due to fine arts, and eleven exhibitors won gold medals.

The prestige of the manufacturers and that of the government were thus deftly intertwined, and therefore, by encouraging technological competition within France, Neufchâteau intended for this exhibition and its hoped-for successors to raise the level of French technology above that of England, and he also planned to expand French commerce on the continent by demonstrating the excellence of French goods to foreign observers.

He also wanted to make the exhibitions annual, but the distractions of war delayed the next one until 1801; a third one was held in 1804 and the fourth in 1806, which showed that they had become part of Napoleon's economic and political policy. The French exhibitions continued to evolve, with the sixth in 1823 and the seventh in 1827, and each of these had about 1,600 exhibitors.

There was one held in 1834, and the exhibition of 1839 was nearly 40 per cent larger than its predecessor. The exhibition that followed in 1844 was even larger. By then the five year interval seemed established between exhibitions and the next one was held in 1849.

As early as 1834, there had been requests to permit foreigners to display their goods in Paris, because many felt that the national exhibitions were too restricted. In preparation for the Exhibition of 1849, the
Minister of Agriculture and Commerce suggested that the exposition should include the products of foreign nations, but French manufacturers jealously opposed the change, however, and the honor of holding the first International Exposition fell to the English.

NINETEENTH CENTURY WORLD'S FAIRS AND BEYOND

The nineteenth century brought with it mechanized means of production, and unrestricted production became an end in itself, bringing disorder into human relations; although, there was great faith in the potential of machines, and many felt that the machine could aid in the reduction of human misery. The institution that was to become the world's fair was an invention of this period, generated by such establishment ideas as laissez-faire world trade and the notion of limitless industrial progress.

The international exhibition also grew out of the old fairs that had been familiar to every century, but in a manner unparalleled in earlier periods; it served as a concentration point for human activities of every sort with the emphasis always falling on industry and its latest inventions. The exhibitions sprang from and symbolized the urge to master the earth's resources and draw out all its wealth; this concept, and the optimism of the nineteenth century and its faith in the possibilities of industry were reflected in the spirit of the great exhibitions.

The exhibitions fostered a spirit of rivalry, and a desire to equal or improve upon the last one; thus risks were taken in all aspects of the exhibition as an institution and its architecture was always conceived to present "advanced design trends".

It was stated that, "It seemed that each exhibition had to surpass its predecessor in order to maintain an atmosphere of novelty and avoid the dreaded accusation 'deja vu'. "
The history of exhibitions during the latter half of the nineteenth century constitutes at the same time a history of iron construction because at this point in time iron was considered the most truly expressive medium of the period, and since exhibition buildings were planned for rapid erection and dismantling; both were facilitated by the use of iron. Therefore, the exhibition became the trial grounds for new methods of construction, and when construction experiments succeeded at the exhibition they became a part of standard building practice; it was in this way that the Eiffel Tower came to be erected in 1889, despite the most doleful prophecies of disaster.

The world's fair became one of the dominant cultural forces of the nineteenth century; they were usually visited by multitudes of people, many who had traveled great distances, and therefore, the impact of a new idea or an interesting solution would have widespread influence.

It all began with "THE GREAT EXHIBITION OF INDUSTRY OF ALL NATIONS", in 1851, and at first the idea of an international exhibition in Victorian London met with skepticism. With the enthusiastic support of Prince Albert, the exhibition was finally brought about, and it proved to be a triumph from its opening day. This first world's fair, a smashing financial success, set off an international world's fair furor that has never died down, although as an institution it has been transformed continuously by shifting social, cultural and technical forces.

The present century opened with high hopes and new scientific wonders, and it was epitomized at the St. Louis World's Fair of 1904, where President Theodore Roosevelt, having opened the fair by telegraph from Washington, came to look at the first large exhibit of automobiles ever assembled anywhere. The buildings at the Fair were hardly innovative, they were in
the "French" style, then in an advanced state of decay, and every elaboration that the "diabolical" ingenuity of the architects could devise was incorporated. In a senso, St. Louis was the last of the more traditional world's fairs, after World War I, the fair as an institution underwent major changes.

The Wembley Empire Exhibition in 1925, was an expression of a desire for comprehensive planning, and of doubts concerning the benefits of uncurbed industrialism; the 1925 "Exposition des Arts Decoratifs" started a hectic series of "moderistic" fads, based on nothing more than a weariness with old things.

These fairs were symptomatic of the coming ideals that was to transform the fair; a fair could no longer hope to show everything, mere size had become exhausting, not impressive.

In the final analysis, the fair's survival as an institution in the twentieth century has been based on its ability to accommodate change and the impact of new ideas, but for it to continue as a "viable" force in the lives of men and as an environment for "innovation", it must respond to the needs of the time within the possibilities of its role as a place for exchange and diffusion. Today this means the exchange of ideas and not of goods, and the diffusion of knowledge rather than things. Therefore, this thesis will illustrate how the fair was transformed as an object in the environment, largely as a resultant of what the establishment attitude was toward the fair at a given point in time, and how the professional attempted to manifest this attitude in built form.
PART II. ANALYSIS OF SELECTED FAIRS
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DETERMINATION OF FACTORS

I have chosen to analyze five international and two national exhibitions. As a group, they are each symbolic of their times and the dominant establishment forces and attitudes that gave rise to their origins and expressions as physical environments.

Emilio Ambasz states that, "We could in this light, accept the aspiration for Order—one of humanity's most widespread and constant desires—as an ever-reappearing archetype, acquiring different formal characteristics—that which we call prototypes—according to whether it is responding to religious, literary, urban, or technological notions of order.

The aspirations imbedded in an archetype are always the same, although expressed in different forms according to the values of the culture enacting it. In this manner, the prototype or prototypical form created for satisfying the archetype's aspirations, on one hand is determined by its cultural context and on the other contributes to determine its own cultural context."

Each was evolved out of social conditions and ideals that sought to make manifest the idea of progress in a specific environment at a point in time, and as in the case of all artifacts, the significance of the cultural milieu as a form determinant can not be understated.

The term "genre de vie" used by Max Sorre includes all the cultural, spiritual, material, and social aspects which affect form. Therefore, "we can say that houses and settlements are physical expressions of the 'genre de vie', and this constitutes their symbolic nature." For an artifact to be created, it must be preceded by its design, which in turn represents the materialization of an ideal. All form is
thus ultimately determined by ideals, as all conscious action is in the
end governed by ideas. It is also important to remember that, "every
culture lives within its dream...This dream pervades the life of culture
as the fantasies of night dominate the mind of a sleeper; it is reality,
while sleep lasts. But like the sleeper, a culture lives within an ob-
jective would that goes on through its sleeping or waking, and sometimes
breaks into the dream, like a noise to modify it or to make further sleep
impossible."4

As an institution, the world's fair has the potential of breaking
into the "cultural dream" to redirect form synthesis based upon its tem-
porary nature. It is also symbolic of official attitudes, and the desire
on the part of architects to capture this sentiment in built form.

This aspect of the world's fair has developed primarily because the
more traditional techniques and approaches to building and design are
"relaxed", which gives the designer an opportunity to experiment or a
chance to prove that something can be done.

Therefore, the fair as a "creature of imagination" lends itself to
the realm of "innovative design" or the full development of the latest
cliches; thus making the latent manifest. In this regard, it has been
stated that, "We know nothing of tomorrow or of the city of the future
except that its roots are in today and in the present city."5

What makes the fair unique as a planned environment besides its tem-
porary nature, is the high degree of symbolism attached to it as an ex-
pression of certain professional values and a manifestation of establish-
ment priorities.

I will analyze the selected fairs concentrating on those features
which are magnified by the changes in attitudes and values.
George Banz has pointed out that, "...since the direction of such changes is unpredictable, people must reinvent their environment all the time...

Invention is thus not so much a cause of progress as a way in which changing needs (and ideas) can be adapted to a 'stable' environment; and design is the method by which invention is applied to (urban) form. In other words, invention shapes intervention through design."

All fairs have shared this characteristic of the molding of social space to adapt to changing environmental conditions, the process being; invention (form-conceiving), design (activity integration) and intervention (construction and materialization). Therefore, I will look at the selected fairs through the "filter" of the "re-inventive" process of design based on the following factors:

1. Motivational Values (Inception and Development)
   What were the apparent reasons for inception and how were they crystallized to develop the original idea.

2. Purpose (Theme Philosophy)
   From the original intent, around what broad social or philosophical goal was the concept based, to give it a raison d'etre within the framework of the motivational values.

3. The Phenomenal Environment (Planning and Architecture)
   What was the physical manifestation of the motivational values and their purpose? At a point in time in a given society, how was the symbolic intent of the institution given character in built form? Therefore, the considerations are as follows: a) site selection; b) planning considerations; and c) architectural statements.

4. Feedback (Essence and Implications)
   How well did the reality measure up to the fantasy? What was the significance of the institution in both cultural and physical terms?

FAIRS SELECTED

The fairs I have selected are as follows:

1. "THE GREAT EXPOSITION"
   LONDON INTERNATIONAL EXPOSITION 1851
   This being the first international exhibition ever held was a major transformation of the old national exhibitions. It grew out of the "boundless" optimism of the Industrial Revolution, the personal will
of Prince Albert and a physical form generated by the genius of Joseph Paxton.

2. "THE WORLD'S COLUMBIAN EXPOSITION"
   CHICAGO WORLD'S FAIR 1893
   The societal and cultural influences that shaped this exposition was in large measure influenced by the United States' growing industrialism and the spiritual attitudes of the "glided age" just before the turn of the nineteenth century. The cultural climate was determined by the very rich who believed that imitation was virtue, and they found their image in the power of ancient Rome. The architects of the day worked under this influence and the buildings of the period reflected strong neo-classical symbolism.

3. "BUILDING THE WORLD OF TOMORROW"
   NEW YORK WORLD'S FAIR 1933
   The misery of an economic depression and all of its uncertainties helped shape the fantasy of "Building The World Of Tommorrow". The Fair was an attempt to give people a reason to hope for a better tomorrow by providing a glimpse into the future. The theme was "futuristic" and the physical environment attempted to reconcile the spiritual intent of the Fair.

4. "THE FESTIVAL OF BRITAIN"
   LONDON NATIONAL EXHIBITION 1951
   The impact of World War II shook the English, but it did not destroy them. The idea of holding an international exhibition in 1951 to celebrate the 100th anniversary of the "Great Exposition" was proposed right after the war. Because of financial problems the international exposition was cancelled in favor of a national exhibition. The Festival was laid out according to the picturesque theory of traditional English landscape design, but was its first urban use.

5. "SWISS NATIONAL EXHIBITION"
   LAUSANNE 1964
   The explicit purpose of the Swiss Exhibition was an attempt to reinforce the concept of democracy and to present the "nation" to the people. In a sense the National Exhibition is considered an important social institution by the Swiss people, and the planning and organization of it as a physical environment is handled in such a manner as to enhance rather than detract from its spiritual and symbolic intentions.

6. "MAN AND HIS WORLD" (EXPO '67)
   MONTREAL WORLD EXPOSITION 1967
   Canada's 100th anniversary as a nation gave rise to an international exposition in Montreal. Expo '67 as it was called was not only planned to show off Canada, but it was also planned to utilize its role as a laboratory for approaches to urban design. Some of the breakthroughs were significant, such as Habitat and the transportation system.
7. "PROGRESS AND HARMONY FOR MANKIND" (EXPO '70)  
OSAKA WORLD EXPOSITION 1970  
Japan feeling the strength of her new found economic and political well being decided to invite the nations of the world to the first international exposition ever held in Asia. At Expo '70, there was standing feature being Tange's Space Frame.

8. "PROPOSED BICENTENNIAL COMMEMORATION" (EXPO '76)  
PHILADELPHIA WORLD EXPOSITION 1976  
(Refer to PART III. of this thesis)
SURVEY OF SELECTED FAIRS

1. "THE GREAT EXHIBITION"
   LONDON INTERNATIONAL EXHIBITION 1851

INCEPTION AND DEVELOPMENT

After the end of the war with Napoleon at Waterloo, the monopoly held by English merchants and farmers in the national market collapsed. This condition prompted the farmers and land owners to request Parliament to pass protective legislation in favor of their interests. The result of this request was the passage of the "Corn Laws of 1815", which in effect restricted the import of foreign grain into England. Those who challenged the "Corn Laws", felt that the growth of the industrial and manufacturing interests were of greater importance to the nation as a whole. Ultimately, the "Corn Laws" were repealed in 1846, in the name of "Free Trade".

These developments and the refusal of France to hold an international exposition set the stage for the first world's fair in England, in 1851.

Henry Cole, a high ranking civil servant in the English Government, had visited the Paris National Exhibition of 1846, and returned with the conviction that Britain should have "a bigger and more splendid" exhibition that would exalt industry and the inventive pursuits of craftsmen.

Prince Albert, who had been President of the Royal Society of Arts since 1847, was interested in the idea when it was brought to his attention. He saw in it England's mission and duty, which was "to put herself at the head of the diffusion of civilization and the attainment of liberty".

Cole, a staunch "Free Trader", was among the many people of that time who felt that the rivalry of unrestricted commerce would supersede war.
A Royal Commission was set up, and the English manufacturers were told that in return for releasing a few of their secrets to the world, they would be making a step toward the unity of mankind. At the same time, Prince Albert continued to use his influence and also lent his assistance to the preparation for the international exhibition, although extremists in the church thought the scheme was "arrogant" and likely to bring "wrath" from Heaven. The LONDON TIMES denounced the Prince for proposing Hyde Park as the site for the exhibition, and reported that aliens were already hiring houses near by, to be used as brothels.

**THEME AND PURPOSE**

Charles Babbage, a member of the Royal Society and a famous inventor of the day, expressed the purpose of the exhibition thusly:

"The Exposition is calculated to promote and increase the free interchange of raw materials and manufactured commodities between all the nations of the earth. Its object is not the exclusive benefit of England, and if any such mistaken view is still entertained, it may be without hesitation be started that it would be impossible by any mode of management to accomplish so selfish an object. It is the interest of every people, that all other nations should advance in knowledge, in industrial skill, in taste, and in science. The advances made in the latter subjects acquire permanent existence only through the publicity given to their enunciation and discussion. Refining and elevating all by whom they are received, new principles in taste or in science, as soon as they are accepted as truths, become the property of mankind."

**SITE SELECTION**

The site, finally chosen by the Building Committee was that originally suggested by Prince Albert in the previous year, a large open space between Rotten Row and Kensington Road, immediately opposite to the entrance into Prince's Gate in Hyde Park.

This site consisted of about twenty acres, it was easily drained and comparatively bare of trees. It was also highly accessible from all parts of London, which was a major criteria for its selection. The Building
Committee felt that the location of the exhibition would greatly influence the number of persons visiting the Exposition, and therefore, the amount of the receipts out of which the building was to be paid for.

Although this site worked out to be the best one available, there was still a great deal of hostility directed toward the exhibition in general and this site in particular.

PLANNING CONSIDERATIONS

Everything pointed to the fact that 1851 was going to witness the biggest and best display the world had ever seen: but nobody as yet had given much serious thought to the question of how it was to be housed. The applications for floor space amounted to 400,000 square feet for the English exhibits alone: it was clear that nearly a million square feet would be needed in all, or nearly twenty times the area of either Westminster Abbey or St. Paul's. The responsibility of selecting a suitable building for the Exposition was in the hands of the Building Committee, appointed in January 1850, which consisted of a "distinguished group of architects and engineers."

One of the earliest acts of the Commission was to advertise for plans of a building suitable for their purpose. Certain principles were laid down: it should be temporary in its character, it should be economical in its cost, it should be fire-proof or nearly so, it should be built and fit for use in an inconceivably short time, and capable of being removed in still less.

There were some 240 designs for the building offered, a certain number of them were selected as worthy of praise, and some as deserving more substantial rewards.

For various reasons there arose in the public's mind, not only in
England but on the Continent, a belief that the Commissioners would not be very rigid in interpreting their rules, and the suspicion was confirmed; the various plans chosen for prizes seemed to vie with each other in violating the rules laid down by the Commission.

ARCHITECTURAL STATEMENTS

Although the Building Committee had high praise for many of the plans submitted, they said there was among them all no single plan they could recommend for adoption, and proceeded to submit a plan they had made themselves. The design accepted was by Isambard K. Brunel, a "varied genius" who designed steamships and guns and built bridges, but his building was all roof and verandah, and perched upon this squat and monotonous shed was a dome of one hundred fifty feet high and two hundred feet in diameter, that was to be made of sheet iron.

The foundations required for this building would have in themselves precluded a building of temporary nature, and even if it could be possibly erected in nine months, it was going to cost almost as much to remove such a structure as to put it up, and it was doubtful if the materials would have any break-up value worth mentioning.

In the meantime, Mr. Joseph Paxton had devised a new kind of architecture, the chief materials being glass and iron.

Paxton was a gardener by trade and at one time was in the employ of the Duke of Devonshire where he had risen far above the status of head gardener, he became the Duke's guide, philosopher and friend. Although Paxton was involved in many different activities, he maintained his interest in gardening, and by an edifying freak of chance, it was Paxton's continued attention to the horticulture of his early years that gave him his chance of greatness.
In 1837, an English traveler in British Guiana had been refreshed by the sight of a water lily of a size and beauty that had been undreamed of. In 1846 the seeds were germinated, but three years passed without a flower; it seemed as though the flower would not grow in England. In August of 1849, Paxton secured a plant for Chatsworth and built it a special heated tank. In three months, it flowered with leaves of five foot diameters. No sooner had Paxton achieved his "miracle" than he was faced with the necessity of rehousing it, and so he built his Lily-house, "a gracious and airy little structure of glass, not unlike the lily itself in its slender strength". One day Paxton had set his small daughter to stand on one of the lily's wide spreading leaves, and it had borne her weight.

Paxton had studied its construction; strong rusty ribs radiating outwards, held taut by the lightest little green cross-ribs, it was a miracle of economy, strong and light. It was stated that, "Science perhaps some day would follow where nature led", and Paxton was not far behind.

Upon learning of the nature of the proposed exhibition building, Paxton managed to convince the Building Committee to reject their design and accept his scheme. This was no small task, but Paxton was able to pull it off successfully through skillful political maneuvering, and the pressure of public opinion in favor of his design.

His design for the exhibition building was similar to his Lily-house design; it was the lightest, the strongest, the most economical thing you could imagine.

The ILLUSTRATED LONDON NEWS came out with a reproduction of his design, explaining that it would be cheap and quick to build, it could be
taken down in no time, and re-erected elsewhere. It contained no vestige of brick stone or mortar, and everything could be pre-fabricated in enormous quantities everything could be used again. The major building component would be glass and this was "revolutionary" in itself because no building up to that time had ever used glass as a major material in construction. Now Paxton was designing a building which was going to require a third of the entire glass production of 1842; and hence its name, the Crystal Palace.
THE CRYSTAL PALACE

plan

0 500'
THE "CRYSTAL PALACE"
(Joseph Paxton, designer)
London International Exhibition 1851

AN INTERIOR VIEW OF THE "CRYSTAL PALACE"
London International Exhibition 1851
2. "THE WORLD'S COLUMBIAN EXPOSITION"
CHICAGO WORLD'S FAIR 1893

INCEPTION AND DEVELOPMENT

Shortly after the Great Fire of 1867, a group of Chicago’s business leaders planned an exposition to advertise the greatness of the partially rebuilt city. It was called the Interstate Industrial Exposition, and the exhibition was to cover “the entire field of human knowledge”, but the emphasis was quite naturally on the subjects about which the founders knew most, “industry” and “commerce”.

As Chicago continued to grow and prosper, the directors of the old Interstate Industrial Exposition put forward another bold scheme to bring to the attention of the world, the accomplishment of the “city by the lake”. A company was organized to raise five million dollars to underwrite the cost of the exposition, and Senator Shelby M. Cullom of Illinois agreed to introduce a bill which would make the exposition an official project of the United States Government. It was at this moment that Chicago’s aspirations were most seriously endangered.

Cullom in a moment of senatorial absent-mindedness, neglected to specify that the fair was to be held in Chicago. A vigorous competition immediately arose among New York, Washington, and St. Louis, each of which wanted to take the honor away from Chicago, but when New York made a matching offer of five million dollars for the fair, Chicago offered double that sum, and at last, Chicago had its prize.

A national commission was appointed to supervise plans for the fair, and Harlow Higinbotham, a self-made Chicagoan who had seen the city for the first time from the top of a load of hay being brought into market, was named president of the exposition.
THEME AND PURPOSE

The idea of holding a celebration to acknowledge the four hundredth anniversary of the discovery of America by Columbus was considered in 1855, but the idea was dropped until 1890 when Chicago decided to show herself to the world, and to use the anniversary as the purpose. After Chicago was decided upon as the site of the exposition, President Benjamin Harrison issued the following proclamation, December 24, 1890: "...And in the name of the Government and of the people of the United States, I do hereby invite all the nations of the earth to take part in the commemoration of an event that is pre-eminent in human history and of lasting interest to mankind by appointing representatives thereto, and sending such exhibits to the World's Columbian Exposition as will most fitly and fully illustrate their resources, their progress in civilization..." 12

SITE SELECTION

In selecting the site of the Columbian Exposition, there were several points to be considered. First, it was stated, "it should if possible, be on the shore of the Lake, in a location not far distant from the business center of Chicago, easy of access by land, and water, and yet not intersected by streets or railroads; it must afford space, without crowding, for a group of edifices much larger in size and number than those of any former international exhibition, and it must contain as few improvements as possible, so as to present no difficulty in the way of securing and preparing it for the purposes of the Fair." 13 With these stated requirements, the selection of a proper site to fulfill these terms presented a problem because the few vacant tracts on the outskirts of the city that were available were low, flat, and marshy. Only on the shore of Lake Michigan was there an element of the picturesque, and only
at one point on that shore could the necessary conditions be obtained. This was in the section of the southern park system known as Jackson Park, an almost triangular piece of land 586 acres in extent stretching for a mile and a half along the shore of the lake, nearly seven miles southeastward from the business quarter of the city, and skirted on its western verge by the Illinois Central Railroad. Connecting it with Washington Park was the Midway plaisance, a narrow strip of ground a mile in length and some what less than a furlong in width, lined with a border of shade trees and dotted with miniature lakes.

**PLANNING CONSIDERATIONS**

Two years before the fair was to open, a group of architects met in Chicago to plan its buildings. Among them were Frederick Law Olmsted, the landscape architect who laid out New York's Central Park and the Chicago suburb of Riverside; Richard Morris Hunt, Charles McKim, George B. Post, Henry Ives Cobb, Louis Sullivan, and such sculptors as Augustus St. Gaudens and Lorado Taft. When the group met for a luncheon, St. Gaudens called it the greatest meeting of artists since the fifteenth century, but there was artistic disagreement at the luncheon.

The Chicago architects wanted to express their functional ideas in the fair's buildings; the eastern group insisted upon a classical theme. Burnham, anxious to secure the greatest possible participation in the exposition, prevailed upon his Chicago colleagues to accept a compromise, which caused Louis Sullivan to exclaim that the harm that would be done by the influence of the exposition would set "native" American architecture back by a half century.

After the selection of the architects, the next major task was the transformation of the bleak South Side beach into a landscaped park.
Olmsted had been selected as the landscape architect and it was his responsibility to design the site layout for the exposition. Although he called himself a landscape architect, Frederick Law Olmsted was, in the broadest sense of the term, a "prophet" of environmental design.  

In his design for Riverside he introduced a number of "fresh" and "original" design concepts which resulted in a community plan that served as a source of inspiration for communities throughout the country, the main features being: total design to satisfy social as well as individual needs of the community's citizens; an attempt to preserve and work with natural topographical features; and he deliberately depressed and curved the streets to fit the topography and to create a pleasant community environment.

Olmsted's challenge at Jackson Park was to convert a barren wilderness into a garden spot. To do so, he employed a system of canals and miniature lakes as the backbone of his layout by taking advantage of the marshy conditions of the site. Through skillful cut and fill, he divided a portion of the site into a group of islets connected by ornamental bridges.

The site was zoned into three major areas all connected by the waterways, the central feature being in the middle portion of the site a lagoon surrounding several islands, the largest among them being a wooded tract about 1700 feet long and from 200 to 500 feet wide. The overall flavor of the landscaped layout was Beaux Arts in attitude, consisting of winding walks and drives, floral designs, statuary and fountains.

Although the eclecticism of the Fair's architectural motif has long been sharply criticized, the Exposition's site plan stands as a brilliant work of civic design. It exemplified Olmsted's philosophy that a liv-
able city can be created only when its open space is planned in an orderly fashion. His arrangement of the exposition's buildings and his artful design of the spaces they formed created an urban design composition which reawakened America to the need for beauty and order in city development.

ARCHITECTURE

Chief of Construction, Daniel H. Burnham, in trying to decide how to choose architects for the several buildings was convinced that the idea "of throwing open the contracts to general competition" was undesirable, and he persuaded the Building Committee to select men of approved reputation and ability.

He felt that, "The Honor conferred on those selected would create in their minds a disposition to place the artistic quality of their work in advance of the mere question of emolument, while the emulation begotten in a rivalry so dignified and friendly could not fail to be productive of a result which would stand before the world as the best fruit of American civilization." 

Thus from Chicago, New York, Boston, and Kansas City, but mainly from the two first, a staff of architects was chosen, whose work it was stated had, with rare exception, left no doubt as to the propriety of their selection. While receiving but a small proportion of their usual income, purely from love of art they devoted their time and talents to the enterprise with a zeal and enthusiasm worthy of themselves and of the trust which the nation imposed in them.

The architects chosen and the respective building they were responsible for designing are as follows:

The Administration Building was assigned to R. H. Hunt, of New York; the Machinery Building to Peabody and Stearns of Boston; the Agricultural Building to McKim, Mead and White, of New York; the Stockyards Building to Holabird and Roche, of Chicago; the group of build-
ings at the pier-head to Francis M. Whitehouse, of Chicago; the Manu-
factures and Liberal Arts Building to Mr. George B. Post, of New
York; the Electricity Building to Van Brunt and Howe, of Kansas City;
the Mining Building to S. S. Beman, of Chicago; the Transportation
Building to Adler and Sullivan, of Chicago; the Horticultural Build-
ing to W. L. B. Jenney, of Chicago; the Woman's Building to Miss
Sophia G. Hayden of Boston; the Fisheries Building to Henry Ives
Cobb, of Chicago; and the Art Building to Charles B. Atwood, of New
York."

Under Burnham's direction "a simple type of renaissance art" was
chosen for all the buildings. It was stated that, "It is interesting to
reflect upon the style that was selected for them by the many distinguish-
ed architects concerned. Doubtless no other style suggested itself as pos-
sible. Probably no one even thought that it might be best to choose some
form of Gothic, though Gothic lends itself so well to picturesqueness of
general effect and to variety in the treatment of special features; or to
choose that type of Romanesque which Americans have so generally practiced
in recent years, and have so commonly believed to be adaptable to all mod-
ern needs. When it came to the designing of structures which had to be at
once very monumental and very practical, and in which economy had to be
considered, renaissance art must have been recognized at once as the only
adequate resource." 23

"If", said one of the architects in speaking of the buildings, "each
man had been permitted or encouraged to make his especial building an un-
restricted exhibition of his archaeological knowledge or ingenuity of de-
sign, we should have had a curious, and in some respects perhaps an in-
teresting and instructive polyglot or confusion of tongues, such as in
the early scriptual times on the plains of Shinar was so detrimental to
architectural success. The show might have contained some elements of
the great American style; but as a whole it would have been a hazardous
experiment, and it certainly would have perplexed the critics. In respect
to the architecture of the great court; therefore, it seemed at least safer to proceed according to established formulas, and to let the special use and object of each building, and the personal equation of the architect employed on it, do what they properly could within these limits to secure variety and movement." 24

To some, it was stated, "it may appear inconsistent to display modern industry in temples whose style of architecture carries the mind back to the days of Augustus Caesar and of Pericles, to place, for instance, hydraulic presses in a building into which one passes between classic columns of an order devised more than a thousand years before printing was invented. But in other fields than this art has been made subordinate to the utilities." 25
THE ADMINISTRATION BUILDING
(Richard M. Hunt, architect)
Chicago World's Fair 1893

THE MACHINERY HALL
(Peabody & Stearns, architects)
Chicago World's Fair 1893

THE AGRICULTURAL BUILDING
(McKim, Mead & White, architects)
Chicago World's Fair 1893

THE ILLINOIS STATE BUILDING
(W.W. Boyington & Co., architects)
Chicago World's Fair 1893
THE ELECTRICAL BUILDING
(Van Brunt & Howe, architects)
Chicago World's Fair 1893

THE HORTICULTURAL BUILDING
(W. L. B. Jenney)
Chicago World's Fair 1893

HALL OF MINES AND MINING
(S. S. Beaman, architect)
Chicago World's Fair 1893
New York not to be outdone by the Century of Progress Exposition held in Chicago, during 1933 and 1934 in the midst of a depression, decided to hold one of her own, naturally to be larger and better than the one held at Chicago. Therefore, New York's business community announced that it would hold a world's fair in 1939 and 1940, when the depression was expected to be over. This was to be New York's second fair since the first one that opened in 1853; the first in this country.

The original idea of holding the fair was conceived by Joseph Shadgan, an engineer, who lived in Jackson Heights about a mile west of the site later chosen for the fair. He thought it would be an effective make-work, make-prosperity project. Hence, Shadgan discussed the idea with Edward F. Roosevelt, a distant relative of the President, and then they presented it to a group of businessmen interested in civic welfare.

The group was headed by George McAneny who first introduced the idea of the fair to New Yorkers on September 23, 1935. McAneny, builder of the subway, town planner, acting major in an era of reform had made such a reputation as a civic idealist that when the fair was first announced, it came nearer to winning unanimous approval than any other large community enterprise that had appealed to New York since World War I.

The plan was approved by Mayor La Guardia and Governor Lehman, and it got the implied endorsement of President Roosevelt, who said he was "interested" in it. The one hundred and thirty-one incorporators who vouched for the first corporate plan, which was accepted by the State of New York in October, 1935 were probably the most eminent group in the ag-
aggregate that ever signed papers of incorporation in New York. George McAneny was appointed chairman of the board of directors and Grover Whalen became president, a man who had almost become a legend for "getting things done".

**THEME AND PURPOSE**

The OFFICIAL GUIDEBOOK OF THE NEW YORK FAIR stated that,

"The New York World's Fair dramatically celebrates the 150th anniversary of the inauguration of George Washington as the first president of the United States in the city of New York. In his Inaugural Address to Congress, Washington solemnly declared that the 'preservation of the sacred fire of liberty, and the destiny of the republican model of government, are justly considered as deeply, perhaps as finally staked, on the experiment entrusted to the hands of the American people'; ... The American experiment in democratic government has long ago ceased to be an experiment; the American ideal has exerted a wide and fruitful influence in the world... Those who formulated the theme determined that emulation was the highest tribute; that the Fair should attempt to accomplish in our day what Washington and his contemporaries did in theirs."  

**SITE SELECTION**

The site selected for the "World of Tomorrow" was chosen soon after the decision was made to hold a fair, and this was done supposedly to avoid future "squabbles" over the selection of a site.

The site chosen was a tract of land consisting of around 1,260 acres on Flushing Bay, on the north shore of Long Island; it was mostly marshy, and part of it was being used as a trash dump. After it was chosen, the land was cleared and reclaimed, with the dump being removed to make way for "tomorrow".

This site was one of the most accessible locales in the Greater New York Metropolitan area, it was serviced by the IRT-BMT elevated transit line, the Independent Subway System, and the Long Island Railroad. It was also easy to reach by auto and by bus, two great avenues lead to the Fair site: Northern Boulevard skirting Flushing Bay at the north and Queens
Boulevard running close to the Fair site at the southeast. Not only was it accessible by land, it was also developed to accommodate those who came by sea; the waters of Flushing Bay which bordered the site was used to provide a yacht basin and landing places for small ocean craft, "to take care of the arrivals by water, not only from the City but from distant ports as well." 28

After the Fair was over, the site was developed as a park and recreation area, and it later served as a site for the New York World's Fair of 1984-65.

PLANNING CONSIDERATIONS

In an attempt to provide a framework for the general layout of the Fair in view of the vast extent of the exhibition, careful planning was essential and the whole area was divided into zones.

It was stated that, "...one of the general plan's great merits is that it has form, there is a structure here on which are disposed the various elements. Axes, circulation, disposition of masses, all are in evidence, yet it is no mere Beaux Arts dream. Perfect symmetry does not raise its head to dispute the practical controlling factors." 29

The establishment of the zones or areas resulted in the creation of smaller fairs within the great Fair itself. Each need was given its zone, and the zone center was tentatively marked with a "focal exhibit". There was in all, seven geographic and thematic zones; although two of the zones, Amusement and Government did not have focal exhibits. The other zones and focal exhibits in alphabetical order are as follows: Communications and Business Systems, Community Interests, Food, Medicine and Public Health, Production and Distribution, Science and Education, and Transportation.
The focal exhibits were non-commercial displays built and operated by
the Fair Corporation. Expanding from the focal exhibits and closely re-
lated to them were the private exhibits of various institutions, industrial
and business enterprises which related to the subject of that zone.

ARCHITECTURAL STATEMENTS

A central control was exercised over the architecture, though more
strictly, of course, over the buildings erected by the exhibition author-
ities than those put up by individual exhibitors. For the most part, the
buildings were of one story and windowless. At first sight, it was stated
that, "the Fair looked like a city for the blind, but for the purpose of
the exhibition, walls are a better background than windows and artificial
light is better illumination than daylight."

At the New York World's Fair, under the dictum, "be futuristic at all
costs", the architects produced an expensive, avant-garde, international
style with overtones of Eric Mendelsohn and Buck Rogers. The Exposition
des Arts Decoratifs at Paris in 1925, introduced and popularized a pris-
matic ornament known as "style moderne", and within two years, this species
of decoration was everywhere apparent on commercial buildings throughout
Europe and on U. S. skyscrapers. The Century of Progress International
Exposition at Chicago, eight years later (1933), similarly created its
own abstract ornament applied to clean-cut forms.

The modern style and functionalism was not so popular with domestic
architecture, but it had by the end of the thirties caught on and firmly
established itself in other directions. Not only was some department store
furniture beginning to assume the squared-off cliches of functionalism,
but designers had gone on a spree of streamlining everything from toasters
to orange juice squeezers.
The symbol of hope of the decade, a futile but bold gesture in the name of peace and prosperity was the biggest architectural last straw at which a people on the brink of war ever gasped; the New York World's Fair announced in indisputable terms that "Modern" of a sort was here to stay, at least for awhile, and at least so far as industrial building was concerned.

The most dominant architectural features at the Fair were conceived by Harrison and Fouilhoux and two new "non-words" were added to the English vocabulary, "Peeisphere" and "Trylon."

These two stark geometric erections were intended to form a striking visual focus and emblem for the whole exhibition, and this Theme Center was where the "glorification" of Democracy radiated from. Every since its inception, the 1939 World's Fair had been promising mankind something new, something big, and something different, and it kept its promise, somewhat.

Entering the side of the Perisphere from a great ramp fifty feet above ground, the visitor embarked on one of two moving balconies, mysteriously suspended without visible support, which carried him around the inside of the circumference in a six minutes' spin through space. Below him stretched a representation of "Democracity," the perfectly planned city of the future, and above him was the dome of the sky in which, as the lights faded, ten equidistant moving pictures of groups of workers appeared, marching through the clouds toward the center of the sphere and "Democracity;" a city of a million people whose homes were located beyond the city proper, in five cattolite towns, and like great arteries, broad highways traversed expansive areas of "vivid green" countryside, connecting outlying industrial towns with the city's heart.
THE ENVIRONS OF THE "WORLD OF TOMORROW"
New York World's Fair 1939

"DEMOCRACY" IN THE INTERIOR OF THE "PERISPHERE"
(Harrison & Fouiloux, architects)
New York World's Fair 1939

THE SHOPPING CENTER "DEMOCRACY"
New York World's Fair 1939
THE GENERAL MOTOR'S BUILDING
(Albert Kahn, Inc., architects; Norman Bel Geddes, designer)
New York World's Fair 1939

THE "STREET OF TOMORROW"
THE GENERAL MOTOR'S BUILDING
New York World's Fair 1939

THE BRAZILIAN PAVILION
(Lucio Costa and Oscar Niemeyer, architects)
New York World's Fair 1939

THE NATIONAL CASH REGISTER BUILDING
(Walter D. Teague, designer)
New York World's Fair 1939
4. "THE FESTIVAL OF BRITAIN"
   LONDON NATIONAL EXHIBITION, 1951

   INCEPTION AND DEVELOPMENT

   The original proposals for an exhibition in 1951 was put forward by
the Royal Society of Arts in 1946. Its purpose was to celebrate the cen-
tenary of the Great Exhibition of 1851 and it was also intended to be an
international exhibition, but as the economic situation deteriorated in
England after the war, it soon became apparent that the Government was
more than doubtful regarding the feasibility, and, indeed, the desirabi-
licity of sanctioning such an undertaking.

   As the possibility of holding an exhibition became less certain, the
Royal Society took an interesting step. After consultation with the
Government, it endeavoured to ascertain the state of public opinion on
the proposal by inviting to a conference representatives of a wide range
of organizations, from youth clubs to trade unions and from learned so-
cieties to local authorities, which between them provided a rough-and-
ready cross section of the whole national life. 34

   This conference was almost unanimously in favor of holding an inter-
national exhibition in London, but was not so agreed as to the wisdom of
attempting to hold it so soon as 1951 or upon the desirability of the site
proposed, namely, Hyde Park.

   On receiving this report, the Government decided to postpone the ex-
hibition indefinitely; later however, it announced that there would, after
all, be an exhibition in 1951, but that in view of current difficulties, it
would be national instead of international in scope. It also stated that
the exhibition would be entirely organized and financed by the state.

   Therefore, in two important respects, the Festival of Britain 1951 dif-
fored by force of circumstances from the exhibition it was to commemorate.

THEME AND PURPOSE

Herbert Morrison, a Member of Parliament, stated that "The idea behind the Festival of Britain, 1951, is to show the contribution Great Britain has made, is making and hopes to make to the arts and sciences of mankind. We aim to do it by letting our neighbors see us at our best, at work and at play. The Festival is our show, it is true, but we shall emphasize that this is our contribution—our contribution to a common civilization..."35

SITE SELECTION

The locale chosen for the Festival of Britain was a 27 acre site on the south bank of the Thames; adjacent to the Waterloo Bridge and bisected by the approach to the Hungerford Bridge. This area had become physically run-down, and it was heavily damaged during the war; hence the exhibition was planned to serve as a stimulus for redevelopment and development of the area, and to make it official, the County of London Plan reserved the area as a cultural and office zone after the exhibition was over.

PLANNING CONSIDERATIONS

Like the Great Exhibition of 1851, whose centenary it celebrated the Festival of Britain of 1951 was in its own way a pioneer design. The earliest exhibitions asserted the architectural respectability of engineering, and culminated in Paris 1889, when Gustave Eiffel gave the world his famous tower. The exhibitions which followed contributed first of all new non-antiquarian styles of decoration (art nouveau was propagated in Paris 1900 and jazz-modern in Paris 1925) and then a new non-antiquarian style of architecture.36

Although some of the more recent exhibitions had attempted to intro-
duce some "new architecture", their planning was on the whole orthodox. It was based on the axial avenue, the cross avenue, the round-point and the vista—in fact on the Beaux Arts tradition. The achievement of the South Bank Exhibition 1951 was that it presented a complete departure from this tradition, it was planned in an informal style, much better suited to exhibitions than the geometrical styles, since it did not exclude the elements of expectation and surprise, and it gave an opportunity for contrast and variety of scale.

The South Bank Exhibition filled the traditional role of the exhibition as a nursery of new ideas in a particularly timely fashion, since the problems that constantly confronted architects and planners on the overcrowded island. Some of the problems began with the small size of the site itself and from this, it was how to give a feeling of space while economizing in the use of space; how to achieve a compact urban character while avoiding congestion—visual and actual; how to weld the ideas of many architects into a whole without stifling originality or imposing uniformity; how to marry the new with the old so that one does not harm the other, but on the contrary, so that the qualities of each enhance the other.

These problems occurred with special frequency in another post-war architectural task, the building of new towns. In a sense the South Bank Exhibition was regarded as a temporary new town, only temporary in nature (or more precisely, the non residential quarter of a town) deposited on the banks of the Thames where all could learn the lessons it contained and the appreciate the ideas it contributed. Although the planning of the South Bank Exhibition was considered revolutionary as far as exhibitions went, the planning principles it represented was by no means
new, they were now only in an urban application.

The principle that the planners utilized was well known in landscape planning and was the basis of the "Picturesque" theory of landscaping which British gardeners developed in the eighteenth century. This theory, now recognized as one of Britain's major contributions to European art, demanded that the latent possibilities of any site should be exploited to the full in order to produce a layout with a character peculiar to that site alone.\(^{37}\) It thus opposed the renaissance theory of superimposing a new character by the use of rigid geometrical forms.\(^{38}\)

The picturesque theory of landscape attempted to capture and use an aspect of nature which was the "happy accident," rich in surprises and complexity. The "natural" beauties of the typical English countryside are in fact synthetic beauties, largely derived from the picturesque improvements of the eighteenth century.

English towns, unfortunately, had the benefit of no such improvements; they grew around the formality of the Georgian market square, and their further growth took form of a series of accidents, without any understood principles to turn them into "happy accidents."

ARCHITECTURAL STATEMENTS

The architecture at the Festival of Britain was not as "revolutionary" as its site treatment, but it was frankly "contemporary." The buildings together represented the largest display of the "modern" architectural idiom that the British public had ever seen, and they also provided a testing ground for the designing abilities of many of the then younger generation of British architects.

To give modern architecture a "richer vocabulary," there was an attempt on the part of the architects to give the buildings a more intri-
cate character. Many of the architects felt as though that if modern architecture was to evolve, it had to move out of its simple geometric "purity period", and to carry through on this idea, they tried to make the buildings intricate through the imaginative use of modern materials (mostly glass and aluminum) and structural techniques; which consisted mainly of the exploitation of the "third dimension" through the use of superimposed transparent planes and a variety of textures in wall surfaces that was meant to be "enriching".

One of the largest buildings at the exhibition and probably the most interesting was the "Dome of Discovery" (Ralph Tubbs, Architect; Freeman, Fox, and Partners, Engineers). The Dome roofed an area 340 ft. in diameter and it was supported on its edge by a system of struts that were as "light" as possible in appearance. The essential aspects of its concept was to enclose a vast space with a "light dome" poised on equally "light" supports, and although, its potential was great both aesthetically and structurally, it was not truly realized; because the infill of the wall between the ribs was enclosed solidly and other aspects of its final form belied its true nature. It was stated that a "dynamic structure" became a "static one".
THE DOME OF DISCOVERY
(Ralph Tubbs, architect)
Festival of Britain
London National Exhibition 1951

INSIDE THE DOME OF DISCOVERY
Festival of Britain
London National Exhibition 1951
ROYAL FESTIVAL HALL AND
THE NATIONAL THEATRE ZONE;
A PROPOSAL FOR AFTER THE FAIR
(Gordon Cullen, architect)
Festival of Britain
London National Exhibition 1951

"TOWNSCAPE" PROPOSALS FOR THE
SITE OF THE FESTIVAL OF BRITAIN
AFTER THE FAIR
(Gordon Cullen, architect)
Festival of Britain
London National Exhibition 1951
5. "THE SWISS NATIONAL EXHIBITION"
LAUSANNE NATIONAL EXHIBITION 1954

INCEPTION AND DEVELOPMENT

The National Exhibitions that take place in Switzerland at certain intervals serve, by unwritten tradition, to form and transform the citizen's image of Switzerland. It is a custom in Switzerland now where every twenty-five years, this image is wholly revised and brought up to date. This is meant to be a collective process of education with a two-fold purpose: firstly, to unify the "image", for groups of people whose "universe" is almost the same are better able to communicate and cooperate more efficiently; the second purpose is to transform the image, the better a man's "image" harmonizes with the existing circumstances, the more efficiently he will act. It is felt that it is to the country's advantage to get rid of outmoded ideas and to adopt new ones in their place, otherwise they feel, that the mechanisms that govern their collective decisions could break down.

The first National Exhibitions in Switzerland had essentially economic aims, they represented the sum of technical progress and were limited to the display of new products that aroused feelings of admiration and patriotic pride. Gradually, they became more political and therefore, more thematic.

The one held in Zurich, in 1939 just before World War II, was regarded as an incomparable expression of the determination of a unified nation to defend itself against a common enemy. In 1954, it was necessary for the Swiss people to realize the rapid growth and development of technical achievement and the problems that had to be solved if the country was to adapt itself to a changing world.
A Swiss National Exhibition is not organized by the public authorities, though they co-operate in its creation in the same way as the exhibitors and all other private bodies concerned.\textsuperscript{42} As an independent organization, it has to raise its own funds: normal working receipts (entrance tickets, various commercial concessions), participation by the exhibitors in the building and interior-decorating costs, advances by the public authorities in the form of outright payments and limited guarantees to cover possible deficits.\textsuperscript{43}

Many difficulties, however, were encountered by the organizers, because some of them failed to understand the meaning and the political importance of the undertaking. The Government stressed that it enables thousands of people from every walk of life to take part in the exchange of views, thus increasing the country's vitability. The National Exhibition, though a political act in Swiss eyes, "must also be a meeting-place marked by the values that man needs: gaiety, beauty, and dignity".\textsuperscript{44}

**THEME AND PURPOSE**

Knowledge is an essential part of the Swiss political system and one of its most typical features; thus, for every generation, Switzerland's National Exhibition affords an opportunity of taking stock, of freely inquiring into the nation's situation at a certain point in its history, of defining its future aims. Therefore, it was stated that, "without knowledge, there is no democracy".\textsuperscript{45}

**SITE SELECTION**

In the selecting of a site for the national exhibition, the organizers felt that mere "technical advantages" were not enough, the decisive factor had to be the "beauty" of it. Therefore, the site finally chosen was on the shores of Lake Geneva; although it was only partially suitable, it was
to be fashioned into a great park.

It consisted of 148,262 acres of land provided by the city and it was made up of a valley and a plain; the valley was a rubbish dump, and the plain was occupied by sports grounds, gardens, and a camping site. The shore area and the western part of the site was heavily wooded, and the eastern portion of the site consisted of 37,065 acres, part of it being reclaimed from the lake.

The approach taken in site development was to divide the area up into compartments modeled round each sector to stress its specific atmosphere. All the "possibilities" of landscape architecture were used: undulating land and trees to give a plastic rhythm, ponds to reflect the light, flowers to give splashes of color. It was stated that, "architecture gains a new dimension when it is combined with the natural environment, which changes from hour to hour."  

PLANNING CONSIDERATIONS

The Swiss National Exhibition was planned around the concept of a multi-cellular unit in an attempt to accommodate the various aspects of a thematic exhibition. At Lausanne an entire nation was to be "offered to the eye" and to the understanding therefore the program for the plan had to define the general themes under which all the activities could be displayed and grouped, and the program enabled a system and rhythm of presentation to be laid down in a scenario.

This allowed the architects to begin thinking about possible layouts early on in the planning stages; although it was at this point, at which difficulties arose with the exhibitors, who put up the necessary funds and whose economic and publicity interests did not always agree with the proposals made by the planners.
Because of this, "endless discussions, meetings, telephone calls, and letters were necessary to reach agreement in various sectors of the Swiss National Exhibition". Moreover, because they represented the same branch of activity, it was necessary to bring together competitive undertakings or associations that were unaccustomed or reluctant to meet for discussions.

These complications repeatedly threatened the elaboration of a general program providing for: a general division, The Swiss Way, serving both as an introduction and as a conclusion to the entire Exhibition; a special division consisting of five sectors divided into sections or groups: The Art of Living, Communications and Transportation, Industry and Handicrafts, The Exchange of Goods and Services, Land and Forest, and in addition: Vigilant Switzerland, a display arranged by the Army and the Harbour, reserved for restaurants and attractions; and apart from this, several buildings, such as Festival Hall, the Railway Station, the Shopping Center, the Children's Garden, etc., were necessary to meet the many requirements of the undertaking. The principle utilized by the Lausanne planners to organize the exhibition, was based on the function of cells in the human body, where each cell performs a special and unique function to enable a single organism to live; therefore, each section or group in each sector was planned to express one or more particular themes in its own way, in order to express a general idea at the higher level of the multi-cellular unit.

How could such an undertaking be conducted in a single spirit? The answer it was stated, was a simple one, "A freely respected hierarchy imposed a system of freely accepted discipline. The management's right of veto, was accepted by all as a principle, was never used. This is
further evidence of what can be done by men who are inspired by a single idea.

ARCHITECTURAL STATEMENTS

Despite the variety of architectonic expression in the Lausanne Exhibition, it was essential to avoid giving an impression of chaos. Discipline was imposed from the start, because each architect accepted a general plan. The National Exhibition, which represented the nation as a whole, was not the work of a centralized office which would naturally have been tempted to express the ideas of a single group.

Each architect responsible for a sector was chosen from a different region, and in agreement with the management, a working team of architects, advisers, graphic designers, engineers, artists, and officials responsible for relations with the exhibitors were organized. The various plans were put into effect by a co-ordinating office at Lausanne, and the Exhibition appointed sector heads responsible for organizing the groups of exhibitors and maintaining contact with the planners and builders. Thus there were available complete working teams which accepted the principles and the instructions laid down by the management.

Buildings that were intended only to serve the needs of the Exhibition were planned for temporary use only, and this principle opened up the way for innumerable experiments in the use of new techniques and materials.

Rapid assembly and dismantling, necessary on account of close time limits and the shortage of labor, made it easier for prefabrication and rationalization that enabled the buildings to be used again.

In the Art of Living Sector, the half-sector's Education and Creation Building (Max Bill, architect), was a good example of a pre-fabricated
"systems" building; the outside walls were made of chipboard panels covered with plastic material, polyester panels for translucent walls, and glass for transparent ones, all held in position by chromium-nickel-steel sections. The building was based on a network of 16 1/4 foot squares, making light individual loads because it was built on soil reclaimed from the lake, and most of it was of very poor quality. This system was also chosen because of the varied needs of the section and in its final form, the building was, "an interesting arrangement of volumes in a natural architectural organism".
AN AERIAL VIEW OF
THE EDUCATION AND CREATION
BUILDING
(Max Bill, architect)
Swiss National Exhibition
Lausanne 1964

ELEVATIONS OF THE
EDUCATION AND CREATION
BUILDING
Swiss National Exhibition
Lausanne 1964

THE "JOY OF LIVING"
BUILDING
(T. Carloni, architect)
Swiss National Exhibition
Lausanne 1964
6. "MAN AND HIS WORLD" (EXFO '67)
MONTREAL WORLD EXPOSITION 1967

INCEPTION AND DEVELOPMENT

The late Senator Marc Drouin of Quebec first developed the idea of a world exhibition in Montreal—to serve as a focal point for Canada's centennial celebrations, to bring Canadians together in Montreal's bilingual atmosphere, and to set before the eyes of the world an image of Canada as a country capable of asserting itself without aid from the United States.

Senator Drouin and Senator Sarto Fournier, former mayor of Montreal, first presented the idea to the Bureau International des Expositions (BIE) in Paris, but that body initially decided that the 1967 world exhibition should be held in Moscow. In late 1962, however, the U.S.S.R. canceled its plans and Montreal's mayor, Jean Drapeau, made a fresh presentation to the BIE, and the exhibition was awarded to Canada.

With BIE approval assured, implementing legislation was quickly prepared and passed by the Canadian House of Commons in late 1962. The legislation, which established a crown company, the Canadian Corporation for the 1967 World Exhibition, to build and run the exposition, had two key provisions: (1) a masterplan was to be completed within 12 months setting forth the basic philosophy and plans of the exhibition, and (2) the exhibition was to be a three-way partnership, with 50% participation by the federal government, 37 1/2% by the provincial government of Quebec, and 12 1/2% by the City of Montreal.

Upon the selection of the site in Montreal, there was a question to decide what form it should take. The only recent comparable event was the New York World's Fair (1964-65), and that had been so depressing
that all discussions on Expo began with the strong negative idea that, whatever Expo was like, it would be nothing like the commercialism of the New York Fair.

The first reports were produced within Expo and by a conference of the province of Quebec Association of Architects. With time pressing, the three governments involved called a conference of educators, literary figures, and intellectuals to take part in a formal seminar on the nature of the proposed Expo. That was to be held at Montebello, Quebec. The broad range of people invited to the Montebello conference, as it came to be called, was a significant first step. For once it was stated, "the planning of an urban environment was brought back into the stream of general culture, and so Expo was almost programmed into making a serious contribution to city design."60

**THEME AND PURPOSE**

The theme that emerged from Montebello, "Man and his World", seemed first so vague that it was no great achievement to have proposed it.61 But, as Jean-Louis Roux said, what it meant was "Man, as opposed to corporations" and "Man as opposed to nations". "Man and his World", the theme chosen at the Montebello conference, derives from the title of a book by the French author, poet, and aviator, Antonie de Saint-Exupery, "Terre des Hommes". The symbol of the exhibition, reflecting this theme, denotes man with arms outstretched, joined with other men in a circle. The theme program was divided into five main groupings: Man the Creator, Man the Explorer, Man the Producer, Man the Provider, and Man and the Community.

**THE SITE**

The selection of a site for the exhibition presented many difficulties,
not the least of which was the shortage of time. Two basic standards were set up: the site should be near the center of the city, and it should feature some relationship to the St. Lawrence River. Many proposals were studied by Mayor Drapeau's administration, but it was finally decided that the Ile Saint-Helene, a park in the center of the St. Lawrence opposite Montreal and linked to the city by the Jacques Cartier Bridge, would be expanded by land reclamation techniques. In addition a new island, the Ile Notre Dame, would be created adjoining the Ile Saint-Helene and alongside the St. Lawrence Seaway.

As finally developed, the site of the exhibition was divided into four main areas. The entrance was at Cite du Havre (Harbor City)—formerly known as Mackay Pier, a part of the port of Montreal. From the Cite du Harve, the new Concordia Bridge across the St. Lawrence lead to the first exhibition area on the western section of the Ile Saint-Helene; the third area was Ile Notre Dame; the fourth, La Ronde, at the eastern end of the Ile Saint-Helen, contained most of the amusement activities.

PLANNING CONSIDERATIONS

At Expo '67, concepts in urban planning and high density land use that planners and architects had been talking about for years was given expression. The design of the fair was based on a hierarchy of ideas: the transportation system formed the backbone of the plan; the major pavilions were planned as focal points of the areas defined by the transport system; and the design of street furniture, lighting, and graphics further reinforced the intent of a comprehensive plan.

The transportation system was designed for two purposes—getting people there and getting people around; and although the exhibition contained many interesting transportation ideas, executed to a very high
standard of design, the basic weakness of the system was that the two purposes were not very well integrated. The only point where Montreal's own transport services reached into the exhibition was at the Metro station on the Ile St. Helene; although bus services starting from various parts of the city took visitors to the main entrance where they transferred to the Expo Express, the high-leveled electric railway that provided the link between the four sections of the exhibition. The Expo Express was very efficient, and many felt that it would have been more useful if it had started in the city itself; and if it had been planned like this it could have remained as a permanent adjunct to the Montreal transportation system.

Within the exhibition, there were two independent mini-rail systems— one larger than the other—operating as three separate loops. These mini-rails were intended as sightseeing vehicles rather than transportation per se. Although, in this capacity they did make a contribution to environmental planning, through their relationship to buildings. Most of the views from them were outside and aerial, but at certain points they entered and passed through buildings, which permitted views from different angles and levels adding a new dimension to the apprehension of architecture.

There were two other forms of internal transportation that also had merit at Expo '67, and these were: the pedicabs that could be hired by the hour, holding two people operated by a cyclist, and small compact cars (folf carts) for the transport of goods, etc.

All of these elements combined had a great deal of potential as "co-ordinated" transportation system, based on a division of complementary services. Even though this was a limited operation, its importance was in the provision of a basis for further application of this type of
fort, not only for fairs, as they become larger and more dispersed; but also for urban transportation systems that presently lack the potential for such a framework.

The land-use plan located the theme pavilions adjacent to the Expo Express stations, where they acted as focal points for the areas allotted to national, private and industrial exhibits. The pavilion areas were carefully planned so there would be varied and continuous point of interest and—learning from the recent New York World’s Fair—no "dead spots." Therefore, the largest pavilions were located at the extremities of the sites leading the spectator through the smaller pavilions.

The landscaping was used to establish pavilion grouping and specific alignments, and the design of street furniture, lighting, and graphics, were each conceived as a "modular system of urban validity," to reinforce the circulation determined by the transportation system.

ARCHITECTURAL STATEMENTS

In an attempt to accommodate diverse designs within the basic framework, the pavilion designers had to conform to suggestions for design unity set forth in the "master-plan design-intent document." The document stated that, "As practically all of the buildings are to be temporary probably constructed of light pre-fabricated elements, it is believed that they should appear to be so constructed and might well have a light and non-permanent character. Architects are therefore, asked to...explore the possibilities of web or film-like materials stretched over bold frames or the frank assembly of mass-produced components fastened together in patternful ways...(If this is done) the buildings will more likely have an interesting, complex, and fragile quality rather than appearing
to be merely big smooth and jointless.\textsuperscript{62}

In response to this "statement of design intent", there was a variety of structures made up of small repetitive elements; therefore, at Expo, the "bugaboo" that industrialized building must of necessity be monotonous because of the repetition of standard components was clearly dispelled. The contemporary problem of ordering diversity while not suppressing it was the challenge at Expo, and the instigation of diversity was generated by the "chauvinistic" interests of nationalism that was expressed in many of the pavilion designs.

Although there were some shocking statements in some of the pavilion designs, there were also some successful national pavilions: these being the pavilions of Switzerland, Holland, Cuba, West Germany, Canada, and the United States.

To offset the extremes of overly nationalistic designs, there was a beginning of design unity based on the spirit of co-operation that is politically embodied in the European Common Market. There were two attempts at Expo '67 that indicated that this spirit was in the air: the five Scandinavian countries combined to build themselves a single, shared pavilion and "Africa Place" was a unified structure planned around a courtyard, providing under one roof, exhibition space for sixteen of the newly emergent African nations. In addition, the several Canadian pavilions; federal and provincial was treated as a group though individually designed.

At Expo, however, there were two buildings worthy of significance beyond fair ground exhibitionism; these being the U. S. Pavilion and Habitat '67.

Many had doubts about the architectural possibilities of the geodesic
dome; the Fuller dome had always been seductive in its geometric simplicity, but the questions remained, how would you put a window in it, how would you heat it, how would you cool it, and how would you sub-divide its uncompromising circularity? These and many other questions were answered at the U. S. Pavilion, and Bucky remarked that the pavilion could have been regarded as a prototypical "environmental value", enclosing sufficient space for whole communities to live in a "benign physical microcosm". The twenty story high dome was climatically benign inside because the skin which was carried by the spherical frame was designed like the skin of an animal; a number of the hexagonal acrylic domes had exhaust vents in the center that permitted the interior to "breathe". This was made possible through the use of an elaborate device on each dome that was programmed to go into action when the rays of the sun would strike it at a pre-determined angle. Bucky called the system a mechanically actuated triangular, metallized plastic sun shade that provided the dynamic modulation of the interior climate.

Habitat '67 (Moshe Safdie, architect), was designed as the structural centerpiece of the theme "Man and the Community", but unlike other exhibitionistic marvels of building, the Canadian's design was an abode for man, an apartment house; and as highly original as Safdie's design was, the idea had precedent reaching as far back as the Hanging Gardens of Babylon. There was also a suggestion as well of the sinewy, slanted, wind-bracing diagrams for tall buildings by Louis Kahn (in whose Philadelphia office Safdie worked a year in 1963).

There were strong criticisms launched at Habitat, because of its cost (an estimated $80 million), and its somewhat unique technology (such as elevators that run on slant); but the mood of the Expo sponsors and
the government was "positive" and they stood behind the project all the way. The fair's promoters proclaimed that urban living was a valid concern, and that nobody could complain that Safdie had let them down with his architectural focus.

Safdie's goals for Habitat as an urban apartment design was to provide privacy, identity and choice, commercial spaces, fresh air, sunlight, and a total environment for young and old; and he also wanted to prove that a structure of its nature could be technologically feasible. Therefore, the significance of Habitat is that it was constructed at all, and at the same time, it illustrated that a high density urban housing project could be well designed.
"HABITAT '67"
(Moshe Safdie, architect)
Expo '67
Montreal

THE UNITED STATES' PAVILION
(Buckminster Fuller, architect)
Expo '67
Montreal
7. "PROGRESS AND HARMONY FOR HUMANITY" (EXPO '70)
OSAKA WORLD EXPOSITION 1970

INCEPTION AND DEVELOPMENT

It was just before the collapse of the feudal regime that Japan first participated in an international exposition, that of Paris in 1867. The Japanese had always wished to organize one in Japan, but because of unusual circumstances, they had to postpone them on two occasions.

Japan had planned a world's fair as early as 1912, but American experts advised postponing it for two years, and the First World War had then killed the project. A big international exhibition was again scheduled for 1940, but once more political developments prevented its realization, although all plans had been made and tickets had already been sold.

For Japan after World War II, a new start had to be made, economically and politically; culturally a new identity had to be found, and since the traditional Japanese culture was no longer trusted, it was sought in Western models.

An economic boom in the sixties and the success of the Tokyo Olympics in 1964, further bolstered the country's self confidence, and Expo '70 finally gave Japan her chance to demonstrate her technological independence.

THEME AND PURPOSE

The OFFICIAL GUIDEBOOK OF EXPO '70 stated that,

"In planning this first universal and international exhibition ever to be held in Asia, it is our intent to realize an event that should leave its mark in the history of human civilization, and to this end, while duly respecting the customs and achievements of past universal and international exhibitions, we will base our plans on a new theme linking East with West. Our 1970 Exposition should indicate the progress made by modern civilization, and at the same time mark a turning point toward the development of a still better mode of living for future mankind."
SITE SELECTION

The site selected for the Japan World Exposition, was located about 15 kilometers north of downtown Osaka in the hills between the Senri New Town and the Mihshin Expressway; the hills varied from 26 to 70 meters above sea level and the site was also creased with shallow valleys. About half of the 330 hectares (815 acres) of this site was enclosed by a loop road, and the area inside the road was to become the Exposition site property, and the section outside was to be used mainly for parking and naturally preserved greenerly.

PLANNING CONSIDERATIONS

Kenzo Tange, one of Japan's leading contemporary architects was appointed master planner in charge of basic site facilities, and his responsibility was to give "life" to the theme "Progress and Harmony for Mankind", in the evolution of the plan. In response to this obligation, Tange considered the site as a "tree", with a Symbol Area as the trunk. The moving walks, the monarail and the seven sub plazas were considered as the boughs. They were all painted white, since they were surrounded by the colorful "blossom" of the pavilions, so that Expo '70 could represent a tree in full bloom. Each plaza (the seven plazas were named for days of the week) was a center of service facilities such as information counters, restaurants, shops and restrooms; they also served as meeting spots, or just places in which to rest and relax.

Tange felt that the "tree" was in reality a city, "a bustling center of activity". He also stated that, "And in fact I think we have given certain suggestions for cities of the future. The grounds represent the sudden emergence on the face of the earth of a city with a daytime population of from 400 to 500 thousand people. To meet living needs,
this city is provided with eating, resting, and recreation facilities
with plumbing, and all kinds of energy supply systems...In other words,
the whole layout is a simulated city with organic composition."64

Expo '70 became known as the "exposition of the hills", because the
planners took advantage of the rolling site, and situated an artificial
pond at the lowest point between the hills. Smaller pavilions were lo¬
cated close to the pond, and the larger pavilions were on higher ground,
following the contours of the land encircling the smaller pavilions.
It was felt that the advantage of this arrangement prevented a concentra¬
tion of visitors at the center of the site.

To facilitate the plan, the site was divided into two zones, the
Northern and Southern, by the Central Loopway. In the Northern Zone
were the Japanese Garden and Pavilions; and Expoland (amusement area);
and Administrative facilities were contained in the Southern Zone. The
1,000 meter wide Symbol Area, which included the Main Gate, connected
the two zones, and within the Symbol Area were the facilities devoted
to the main theme.

The Symbol Area was the central feature of Expo '70, stretching
half across the site, consisting of the theme pavilion and Festival Plaza,
a multi-leveled gathering, promenading, performing and crowd-
distributing place covered by one vast roof.

ARCHITECTURAL STATEMENTS

The most prominent architectural feature at Expo '70 was Tange's
Space Frame that covered Festival Plaza, the focal point of the fair.
The Frame itself was 950 ft. long, 350 ft. wide, and 100 ft. high, sup¬
ported on six columns. Originally, he wanted to erect a frame that would
be neutral and "self-effacing", in other words he stated, a simple and
flexible a frame as possible. Although the space frame fell short of his original concept, he felt that in theory the frame was "flexible".

Festival Plaza was designed to be not only the focal point of the fair, but also one of the liveliest parts of the Symbol Area. It was described thusly, "A plaza that is constantly a festival, full of sound, color, light, and movement that is the reflection of the world. A unique meeting place, a place for exciting and varied performances and presentations". Tange felt that in the Festival Plaza people could have an "environmental experience", that by spending time in its exterior spaces and experiencing the feeling of participation in some of its events or happenings could prove to have been an unforgettable and psychologically satisfying moment.

The other most prominent architectural element outside the Space Frame itself, was the tower of the Sun, the central attraction Theme Space. Inside the Tower was an exhibition depicting the evolution of man, and the exhibits were on three levels:

1. the Subterranean Level (Past) World of Mystery
2. the Ground Level (Present) World of Harmony
3. the Mid-Air Level (Future) World of Progress.

Japan as the host country was represented at Expo '70 by 33 pavilions; and since the country had never held a world's fair before, the pavilions were experimental, playful, individual and dynamic; therefore, the best of the Japanese pavilions followed one or two trends: the technical or the artistic.

The technical pavilions were often unusual or even grotesque to eyes accustomed to European (or western) architectural forms. The designers intentions were to have no distinction between exterior and interior de-
sign, but to create an "integrated" environment. This environment consisted of equipment rather than of architectural elements and they were mechanized to provide a "festive" experience for visitors to the pavilion.

An example of the festive or technological pavilion was the Fuji Pavilion (Y. Murata, architect). It was adjacent to Thursday Plaza, and its Theme was "Message to the 21st Century". The message started with the building, mainly because it was the world's largest "pneumatic structure"; it was made of sixteen "vinylon" tubes, each four meters in diameter and eighty meters long. When one entered the pavilion, you mounted a huge turntable that circled the interior of the pavilion every 20 minutes, and as the platform revolved, visitors went from complete darkness into what the sponsors called a "total experience". It was a blend of films, lights, sounds and mobiles into a synchronized computerized presentation; that projected the theme of the mandala (the cosmic order of Buddhism).

Examples of the artistic approach were the Takara, Textile, and Them Pavilion, where environmental art of the various modern schools was on view. The pop artist Tadanori Yokoo tried out a completely new departure in the Takara and Textile Pavilions; he abandoned the somewhat forced pseudo-ditch which he is famous and practised a form of surrealism revealing ideas and taste. He surprised visitors with a kind of happening by leaving the scaffolding on the roof of the textile pavilion, complete with workmen, and painting them red to the accompaniment of black crows. In the interior of the building he set up a big circle of black clothed, grey-haired men in a bright red room. These figures addressed the passers-by or played cat's cradle with laser beams.

It is also interesting to note that the Japanese developed a new
type of organization known as the producer system which was adopted in most of the pavilions. Under this system all the persons in charge of films, acoustic effects, illumination, design, display, and technology were subordinate to the producer, so that efficiently co-ordinated team work was ensured for the whole program.

Technical thinking and enthusiasm for the possibilities it offers are gradually supplanting the old Japanese way of life. This is no doubt one line of approach to a new Japanese philosophy. A new culture can only emerge, however, when artistic creativity and new technology are combined in a humane and harmonious symbiosis.

Although many of the pavilions were "overdesigned", there were some worthy of architectural significance, beyond the bounds of exhibition building; and there were many pavilions in this category, but the one that I will discuss, is the United States Pavilion.

The United States Pavilion (Davis, Brody, Chermayeff, Geismar, and De Harak, architects) was designed inside and out by a unified team of architects and designers operating on a single budget. The pavilion that was finally built was the third one designed, because the other two schemes had to be scrapped because of reductions in the government appropriations for the project.

To cope with the low budget and the large crowds, the architects decided to plan from the inside out, to think of the structure not as an assertive building but rather as an enclosure for the exhibits, to have just as in an oyster lined with mother-of-pearl, an unflamboyant structure hiding a brilliantly light interior. The resulting structure, which was very economical, used extremely complex, innovative techniques. The enormous translucent fabric roof, weighing only one pound per square foot,
was held up by compressed air from four blowers, and it was anchored at
the outside by a concrete ring resting on berms of earth formed from the
material excavated from the interior.

The city planning implications of an almost infinite structural en-
closure have been talked about by Buckminster Fuller and others for years,
but, unlike Fuller's domes, the Osaka structure used air column support
and it alone could escape the physical law that as a span increases lin-
early, strength must increase geometrically. In this sense, the Osaka
structure, for gravity loads, was really a non span phenomenon—each
square inch of the roof had air column support, which could be extended
almost infinitely. The pavilion, therefore, brought us close to the human
dream of the city-scale enclosed environment for the first time.
THE "TREE"
ENVIRONS OF EXPO '70
Osaka
A VIEW OF THE
GREAT SPACE FRAME
AND THE TOWER OF THE SUN
(Kenzo Tange, architect)
Expo '70
Osaka

BENEATH THE GREAT
SPACE FRAME
Expo '70
Osaka

A VIEW ALONG SIDE
THE GREAT SPACE FRAME
Expo '70
Osaka
THE FUJI GROUP
PAVILION
(Yutaka Murata, architect)
Expo '70
Osaka

THE TEXTILE PAVILION
(Tadanori Yokoo, designer)
Expo '70
Osaka

THE UNITED STATES'
PAVILION
(Lewis Davis, Samuel Brody,
and Alan Schwartzman,
architects)
Expo '70
Osaka
ESSENCE AND IMPLICATIONS

In the foregone analysis, it was evident that the influence of changing cultural forces, and shifts in professional attitudes made themselves manifest in built form. Each fair was therefore reflective of how a given society at a point in time, attempted to order and organize a major social institution, embodied in the environment of the fair. To understand those forces and influences, that in some measure, determine the realization of form, one must soon come to "appreciate" the context of which any artifact was evolved. Artifacts are symbols and can explain much about the society of human beings that created them, who they were, what they believed, and how they lived. Therefore, each fair dealt with can be measured in this fashion.

A close examination of any artifact is a graphic description of the level of artistic comprehension of the society that produced it, the form of government, the structure of commerce, and the extent of its scientific and emotional "sophistication".

As a factor of the designed environment, the fair is representative of certain value judgements, official sanctions and ideals of "progress" in a given historical time frame; hence, when we understand the life behind a building, we understand the building, for architecture is one of the most dialectical aspects of all of man's activities. Traditionally, architects and planners have been professional who have had the responsibility of creating the channel between the physical environment and the metaphysical world; and this process is largely filtered through "established elements" of the society that ultimately decides what is built. Therefore, in a brief overview analysis of each fair, I will attempt to distill its essence, and its implications vis a vis the larger society of which it was a part.
Imperialism and The Industrial Revolution

The Great Exhibition as a cultural institution reflected the concerns and ideals of a great imperial power and one of the most pervasive technological phenomena of all time, the Industrial Revolution.

Victorian England was a period in English history, when the sun was finding it difficult to set on the empire of Great Britain, and her power and wealth made her one of the strongest nations in the world at that time.

Although she was a strong powerful nation, this period in English history is also remembered for its contradictions. This was an age that could be characterized by over indulgence, conspicuous consumption, and the wretched poverty that occurred in the wake of the rapid growth of industrial centers. Another set of factors that could also possibly describe the people of this period and their outlook on life would be their anxieties and doubts, brought about through sudden changes in lifestyles and social attitudes. These frustrations were also evident in the architects and the architecture of the period.

Humphry House stated the following about Victorian England:

"The more I read of the early and mid-Victorians, the more I see anxiety and worry as a leading clue to understanding them. They were not complacent compromisers. They were trying to hold together incompatible opposites, and they were worried because they failed. They clung to an immortality that should not include the justice of Eternal Punishment; they wanted a system of administration which should be efficient without expense; in face of repeated and ferocious strikes and riots they clung to the doctrine that the interests of employers and employed were identical. They knew such things as these were incomptiables. They worried because they could neither reconcile them nor move on to other terms of thought. They worried about immortality, they worried about sex, they worried about politics and money. They were caught between two worlds".
In architecture, this anxiety manifested itself in a battle of styles, the Victorians were trying to pursue an intense desire to have a style of their own while remaining convinced that style was a matter of ornament; therefore, every Victorian building of any consequence was a statement of stylistic belief (either a belief in one style, or in the "peaceful" coexistence of styles).

This essentiality meant that if style was ornament, then proper ornament could only be won from the past, and thus the ambiguity of the period was heightened because it became a problem to choose which components constituted a proper style; one that could be "expressive" of the times.

One other frustration for architects of this period was that English governments in the mid-nineteenth century were parsimonious to an almost unbelievable degree, and their parsimony was part of their national philosophy which was expressed from time to time in a horrified contempt for architects and architecture.

The Crystal Palace, a structure not designed by an architect was un-stigmatized by style; although it was symbolic of the times, in its omnipotence and its aesthetic of structural ambiguity.

It has been said that the material of the Industrial Revolution was iron, but the architects of the period was reluctant to use it. During the early stages of the "revolution", architects were inclined towards historical eclecticism and the use of "styles" rather than the original use of iron as were the engineers of the day. Among the early important engineering advances were those in the structural use of iron for fire-proof flooring and in bridge construction. The tensile qualities of iron and particularly of steel allowed new concepts of vast enclosed, spanned spaces; therefore, iron and glass construction became the idiom of market
halls and railway stations, two types of buildings which the rapid growth of populations in the cities of the early nineteenth century and the fast growing interchange of materials and products between factories and cities brought to fore. The earliest example of metal with glass in a dome, however, was the Halles au Ble in Paris, designed in 1809 and built in 1811. This method of construction achieved an even daylight inside the building, which could not otherwise be obtained. At the same time, the designers of conservatories began to realize the advantages of glass vaults.

In the early part of the nineteenth century, there appeared in London, a number of large greenhouses with curved roofs or domes, such as the circular conservatory at Bretton Hall in Yorkshire, which was 100 feet in diameter and 60 feet high. This was followed by the Chatsworth Conservatory which Joseph Paxton built for the Duke of Devonshire in 1837-40 and which was 277 feet long, 132 feet wide, and 67 feet high. With it, the stage was set for the Crystal Palace of 1851, home of the first international exhibition ever held, and an assertive profession of faith in iron as the largest of the suspension bridges.

What made Paxton's Crystal Palace an outstanding example of mid-nineteenth century iron and glass architecture was its enormous size, 1,851 feet long, making it much longer than the palace at Versailles; another factor was the absence of any other materials, and the use of an ingenious system of prefabrication for the iron and glass parts, based on a twenty-four foot grid adopted throughout.

Only by means of pre-fabrication could a building of such size be erected in the miraculously short time of sixteen weeks. The construction of the Crystal Palace accelerated the impact of new technical possibilities that led to the development of skeleton construction, which
was the great innovation of nineteenth century architecture. At the same time a new formal coherence came to replace the classical ideals of balancing the parts in such a way that nothing could be added or taken away without destroying the "harmony." In the Crystal Palace, instead, it was possible to imagine a formal addition or subtraction because of the coherence created by means of repeating the same pregnant technical system throughout. This system also allowed for more flexible internal possibilities and set architecture free to frame new functions and forms of life. The Crystal Palace was a direct forerunner of today's "omni-buildings" and "mega-structures," although at the time there raged a fierce controversy in architecture literature about its relevancy to architecture. Pugin called it the "Crystal Humbug" and "Glass Monster" a bad vile construction and the most monstrous thing ever imagined. Matthew Wyatt wrote in the Journal of Design in 1851 that, "It has become difficult to decide where civil engineering ends and architecture begins."

The influence of the Crystal Palace outlived its controversial origins and its critics. It was ultimately judged as one of the most outstanding examples of nineteenth century architecture, although it was not designed by an architect, but by a "hot-house" expert. The actual structure of the Crystal Palace was dismantled in 1854 and re-erected at Sydenham near London and remained there serving as a museum until it was destroyed by fire in 1937.

In 1851, it never seems to have occured to anyone to do otherwise than house all the exhibits together under the same roof, and up to the century it remained the accepted practice, at any rate in Europe for the majority of the exhibits to be displayed within a single building possibly with closely linked annexes. From the constructional point of view, there were obvious advantages and disadvantages in erecting a single large building.
The speed with which those eighteen acres of Hyde Park were covered in 1851 would only have been possible with the unified design of a single building, and the standard techniques of prefabricated construction. As the exhibitions became more complex, the single building created a problem and this resulted in a change of focus from the mega-structure that housed all the displays to the development of the "campus plan" for exhibitions. Exhibitions were becoming veritable cities (parasitic towns), and those who planned them had to consider such town planning questions as the siting of the buildings, the planning of open spaces, the zoning of the exhibition area according to themes and subjects, and organization movement systems. The Chicago World's Fair of 1893 was the first major fair that was actually conceived as a "serious" attempt to lay out a fair along town planning principles.
2. "THE WORLD'S COLUMBIAN EXPOSITION"

CHICAGO WORLD'S FAIR 1893

Beaux Arts and City Beautiful

The Chicago Columbian Exposition was an expression of an age that saw the United States experience her greatest material growth, a small republic was transformed into a dynamic industrial nation. This was an age of untrammelled free enterprise and one of rugged individualism, where many great fortunes were made and where there was also much poverty. The established attitudes of the period were divided, it was a period of paradoxes. It was at once a time of confident, exuberant creation and growth, and a time of frantic change, upheaval, destruction and demoralization.

On the one hand, there was infatuation with human progress, based on the extension of human powers that science and the machine was providing. But for all their satisfaction at the "advancement of the generality of mankind", men of this age were disturbed by it, deeply afraid of the effects on themselves personally. They eagerly looked for anything, however symbolic and on whatever scale that might recall the old lost sense of permanence and belonging that their fantastic material progress had taken away.

Beginning in the late 1870's and increasingly through the 1880's, artists, scientists, politicians, all began to feel a new imperative to find some solid fundamentals on which to build the future. That such fundamentals could be found they never doubted, for along with the spirit of the times, they had inherited its optimism: though the present be difficult, progress is somewhat inevitable; "we cannot fail". The only question was, which way was progress? In what did the real fundamentals of art, of politics, of life consist? Did you return to the past and re-discover old
fundamentals there? Or did you abandon the past and go forward to discover new fundamentals, or at least reformulation of the old ones in terms meaningful to the new situation? The art and architecture of this period was a tangible record of these divergent approaches to the same basic problem.

The choice that was made by the organizers and planners of the Columbian Exposition was to return to the past, for direction from there. Among the architects that played a role in the designing of the fair, there were two basic groups, the academicians and the rebels, each being representative of differing design philosophies.

Representative of the first group was an academician like Richard Morris Hunt, the first American architect ever trained at the Ecole des Beaux Arts. To other architects, Hunt was the first great inspiration in their attempts to restore "archaeological correctness" and order to American architecture on a grand scale. Hunt became an "overnight" success, when the American "now-rich" realized how wealth and social position could be visibly manifested not merely in the size and lavishness of one's house, but in the degree of accuracy with which the architect had copied "acceptable" European models.

It was Hunt who influenced Burnham to select the proper style for the exposition. Hunt decided that "Imperial Roman" was best suited to the expression of the spirit of American civilization; his Administration Building and the general plan set the pattern for a grandiose official return to what was alleged to be the Jeffersonian ideal of white Roman architecture as the symbolic manifestation of American greatness.

The neo-classic idiom was widely used during the period on banks, court houses, college buildings, and other cultural institutions, but the commercial buildings of the period were truly innovative, mainly in their
use of skeleton construction.

Louis Sullivan, one of the "rebels" or "pioneers", of the Chicago school, and the designer of the most progressive building at the exposition (the Transportation Building), predicted that the damage wrought to this country by the Chicago World's Fair would last a half century.

At the fair, the architects believed that they were reviving the creative spirit of Medician times and the public fancied that the "radiance" of Florence was being recalled for them to live in. What matter that the buildings were but temporary, that they constituted but an elaborate stage setting; for a time at least the illusion of reality had been created. This great formal composition with its strong axial relationships echoed in white plaster the noble cities of the ancient world, and to the thousands who came, they were impressed by the contrast between this gleaming magical vision and the dingy, formless cities of industrial America. Another impetus to this escape from reality was the fact that five days after the fair opened its gates, the stock market crashed, throwing the country into a financial panic. This crushing blow to the outside world resulted in the fair being called the "White City" and the city of Chicago suffering from the depression became known as the "Gray City".

The White City, although not a real urban community, exerted an influence on planning and architecture as Sullivan had predicted. In less than a decade after the fair, its design philosophy and its usage of Renaissance planning devices found expression in true city planning. The principles used to lay out the fair were applied in the planning and replanning of many American cities, and this influence gave rise to a new movement in civic design that was later called the "City Beautiful".
3. "BUILDING THE WORLD OF TOMORROW"
NEW YORK WORLD'S FAIR 1933

Social Overtones of A Consumer Society/Streamform As A Functional Aesthetic For A Capitalistic Society

The Crash of 1929, and the Great Depression that followed, shook American confidence in the old system as World War I never had. American culture was gripped by an anti-Victorian mood; the old order ended and a new one began.

The Great Depression of the '30s was a crucial turning point in the national attitude, mainly because of its prolonged impact and the measures that had to be implemented to bring the country back to life, both spiritually and economically. FDR's many "pump priming" procedures and social programs had a marked effect on how people came to think about material things and the significance of economic and social security. Although faith was eventually restored in the system, the shadow that the depression cast upon the minds of the people was not easily erased.

The New York World's Fair with its emphasis on the abundance of a materialistic society attempted to illustrate the brighter side of life at the phasing out of a period that was not easily forgotten. Therefore, the eyes of the Fair was on the future, and the potential spiritual and material benefits that waited "just around the corner". It was stated that, "Here are the materials, ideas, and forces at work in our world. Here are the best tools that are available to you; they are the tools with which you and your fellow men can build the World of Tomorrow. You are the builders; we have done our best to persuade you that these tools will result in a better World of Tomorrow; yours is the choice".68

If the crash of the market and the ensuing depression severed economic and social ideals of the past, then the International Style and the
Modern Movement closed the gap from an artistic and design point of view; the anti-Victorian emphasis of the International Style suited the dominant mood of the 1930's quite well.

The American adaption of the International Style was based on the old ambivalent American attitude towards Europe: on the one hand taking for granted American superiority in wealth, political stability, in "vigor" and "free enterprise"; on the other still feeling inferior in sophistication, historical experience, intellectual savoir-faire. Therefore, to a period wrought with upheaval and dissolution, the "simplicity" of the message embodied in the Modern Movement was very appealing. American designers found irresistible appeal in the regenerating formulas preached in Gropius' Bauhaus, in Neutra's doctrine of "survival through design", in Le Corbusier's Modulor, and in the kind of simple basic unit employed by Mies to unify the complexities of the Illinois Institute of Technology buildings.

The emphasis on simplicity, textural values, free interpretation of exterior and interior space, incorporation of new technological achievements in planning and design were all tenets of the International Stylists, and they made them a fervent creed carrying them to their "relentless" conclusions. Although American architects generally adapted the trends of the International Style, it was still a movement that grew out of European socialist thought, and its most orthodox aspects did not sit well with the merchandising needs of a capitalistic society.

In the 20's and 30's, there appeared on the scene the industrial designer and it was stated that, "one of the chief duties of the chief duties of the (industrial) designer is to create by means of styling and redesigning, new models and forms for the market--new, at least in their
external appearance". This appeal to market trends and a more sensual form concept was accelerated by the Paris Arts Deco Exhibition of 1925, where Style Moderne was given a major showcase. Moderne was more suited to the market whims of a capitalistic society, and it went through two distinct phases: Zigzag of the 20's and streamline of the 30's; the first reflecting the dominance of the triangle and the 'T'-square coupled with stylized classical derived ornament, and the second reflecting the French curve and compass.

There were examples of both aspects of Moderne at the World of Tomorrow, the streamline being most prominent. Two of the most characteristic buildings of streamform design were the General Motors Building (Albert Kahn, Inc., architects; Norman Bel Geddes, designer), and the Ford Motor Company Building (Walter Dorwin Teague, designer; Albert Kahn, Inc., architects). Another interesting building was Walter Dorwin Teague's National Cash Register Building, a good example of pre-Pop Art, it was a giant cash register forty feet tall that counted the customers as they entered the gates of the fair. The only real International Style Building at the Fair was Brazil's Pavilion (Lucio Costa and Oscar Niemeyer Scares, architects).

A jarring note in all this "froth and fancy" was the plan of the grounds—a rigid, radial scheme to make the the theme effective through the architectural subordination of the rest of the fair. In commenting on the approach of nuclear or thematic zoning, Douglas Haskell stated that, "The procedure is of interest because there are parallel problems in the laying out of new towns that will be needed for our defense and other industries. A town, too, has its characteristic functional zones. Like the Fair, a town cannot tell in advance precisely how large any one such zone will grow to be. Hence the wisdom of spotting a minimal nucleus
around which the area in question can then expand or contract...A formalistic street plan interfered with the free and flexible growth of zone areas, and also deprived them of the chance to be isolated by means of a surrounding cushion of green. Towns badly need coherence and it seems advisable that the cushioning parks or open areas be maintained at all costs. For the sake of coherence in any one functional area of a big plan it also appears necessary, on the basis of the Fair's result, to put under one man's leadership the control over everything that the eye conceives as 'one place'...At the Fair such areas of unity as did exist seemed to have shaped themselves more or less by accident...

In many ways, the environs of the Trylon and Perisphere foretold a rosy future, which diverted contemplation of a dingy present and despite restrictions and soul-searching efforts to articulate the theme, what finally filtered through was a vague message that things were going to get better, but not how or why.

It has been stated that the period between 1929-39 was not a too useful one as far as architectural and planning theory was concerned; architectural theory suburbanized itself to the point where it became almost nonexistent, and where, indeed, architecture itself, or architecture as a topic of general urbanistic meaning almost ceased to exist. Both the "classic" idiom of the International Style and the more organic indigenous American architecture was anti-urban, and in fact, in both cases they embodied an escape from the larger questions of monumental architecture and city building as a whole.

At this point in time the town was either to be spread across the landscape, in a Garden City sense, or built up thoughtlessly in the towers of La Ville Radieuse in a Corbusian sense; therefore, modern
as it had developed and was being taught and practiced in America by the late 30's was small in scale, anti-monumental, and urbanistically destructive.

This in essence was the thinking that shaped the World of Tomorrow, with its quasi Beaux Arts plan and its rather low keyed architectural statements. The Fair was an expression of an attitude that saw the city and aspects of the built environment as well ordered simple organisms, where the problems of diversity and growth and change were to be dealt with through either one or two means: firstly, the suburban or anti-urban concept; and secondly, the mass produced high rise concept. In either case, the architect/planner did not have to confront the fundamental dynamics of life and their complex manifestations in the built aspects of the urban environment.
4. "THE FESTIVAL OF BRITAIN"
LONDON NATIONAL EXHIBITION 1951

Architecture of Compromise and Townscape

After World War II, instead of returning to a norm of complacency (as did the French and Dutch) the British (and the Italians) was determined to create a "new" architectural environment. This "revolution" was, of course, intensified by Britain's social upheaval (i.e. the welfare state) and by the need for replacing an awesome number of buildings.

Early postwar work, of necessity was in an austerity mold, was basically concerned with housing the homeless and providing schools for the young. And as these housing and education matters were affairs of the state, the rebuilding of Britain was initially almost exclusively "officially" inspired. Government architects at the London County Council and elsewhere, realized early that traditional methods of buildings (to say nothing of traditional designs) were not sufficient for the staggering job that faced them, a job that was not made any easier by shortages of skilled labor and materials. Since the war, no country anywhere had concentrated architectural and related talents upon the manifold problems of building as did Great Britain.

Standardization and pre-fabrication became routine procedure to a degree, and these efforts paid off quite well, first in housing and schools, and also in hospitals. By far the largest statements of housing and planning in England can be seen in the New Towns. These, along with several large scale Swedish experiments are the most important architectural and urban developments in Europe. Although the Mark I New Towns were not quite so successful design wise, the English continued to learn from their mistakes and failures, and the evolution of the New Towns as planned environments is continuing.
Overall, the "new" architecture and planning that thus arose had a powerful effect on the introduction of contemporary architectural concepts to a very broad based range of the British public: modern architecture had arrived under the auspices of the government. The Festival of Britain was also a Government sponsored harbinger of a new day in British architecture and planning.

The shortage of funds in Britain in 1951 forced the government to celebrate as a promotion of national pride and patriotism the centennial of the Great International Exhibition with a strictly national exhibition. Whereas the trend in fairs had been toward ever distending sprawl, the South Bank Exhibition was a study in compression.

Over a mere 27 acres, a multitude of structures were tightly knitted together, with only one being designed for permanent use; the Royal Festival Hall. It was designed as a permanent structure, to serve as a nucleus for the further re-development of the South Bank area, after the exhibition was over.

The architecture of the pavilions on the South Bank of the Thames was a non-British international style, remarkable chiefly for a complexity of elements, and gay, vibrant detail, creating a sense of minute scale, and the fact that the public could move around in an environment completely belonging to the "present" was essentially true.

The British, as their predilection, sought a precedent of asymmetrical composition for planning their fair, and found it in the English informal landscape tradition. This urban usage of the principles of "picturesque" landscape theory, gave rise to the "Townscape" concept of Gordon Cullen. He stated that, "In the 'thirties' new building became a battleground on which the modern style of architecture struggled to establish itself. The Government sponsored South Bank exhibition shows how well
this battle is now going. Today's new building projects must become a battleground for modern planning... The first salvo in this new battle has been fired in this same South Bank site..."71

The visual aspect of Townscape was based on how buildings and their surroundings could be regarded together in order to produce scenes and progressions of "emotional value." In discussing the purpose of Townscape, Cullen stated that, "Its purpose is to take all the elements that go to create the environment: buildings, trees, nature, water, traffic, advertisements and so on, and to weave them together in such a way that drama is released."72

Townscape as a planning theory, became a part of many a contemporary planner's tool kits, and the idea of orchestrating the built environment to achieve a visual symphony of "emotional" impact could have inspired Donald Appleyard's VIEW FROM THE ROAD, and Kevin Lynch's IMAGE OF THE CITY.
5. "THE SWISS NATIONAL EXHIBITION"

LAUSANNE NATIONAL EXHIBITION 1964

Unified Environ/City as System

Switzerland, a country where direct democracy is no stranger, is also a nation where the national exhibition has become a somewhat permanent part of the cultural fabric. National exhibitions are traditional with the Swiss, they have held such fairs every twenty five years since 1857, with the first one taking place in Bern; the last previous one was held in 1939, and it was hailed as being "strong and exciting". These exhibitions are ways for the nation to give itself a gigantic pinch, to make sure it still exists; therefore, Expo '54, the sixth national Swiss fair was conceived and designed not so much to achieve commercial and promotional goals, but to provide a grand essay in national self analysis, self expression, and reformulation of purpose.

The 1964 Exposition at Lausanne, it was stated, "broke no new ground"; the tone was sober and self observing. It looked more toward the future than the past, and accordingly, many who went to see the exhibition felt it had an avant-garde, abstract, experimental, or intellectualist atmosphere. This aspect of the exhibition could have explained why there was a sharp drop in the expected attendance. Someone exclaimed that one of the chief pleasures of the Expo was to wander round looking at the Swiss looking at themselves.

Beyond the sober tone and the introspection, the site of the fair was well organized along "systems" concepts and everything seemed in "place", just as in Swiss cities, with well designed street furniture and signs, sculpture at strategic points and well flowered green areas.
The exhibition being laid out as "multicellular unit", that functioned as an organic whole could have symbolically expressed the character of the nation itself, where the various Cantons together constitute a total nation. By planning the exhibition in this fashion, it was not difficult to achieve overall unity because each sector was regarded as a cell and functioned as a semi-autonomous element tied to the rest of the exhibition by a monorail system that was designed to enable the public to visit the entire exhibition "quickly" and without fatigue. The system was flexible enough to pass into the various sectors, go over roads and ponds and through the park on the site, carrying an average of 5,000 passengers per hour.

Although the Swiss are fully sold on contemporary architecture, and has produced an impressive amount of sound new architecture, their recent buildings has demonstrated an unexpected virility of idiom and freshness of thinking. The word "sound" best describes the new Swiss architecture because it does not generally scintillate the way much of Italy's does; it does not encompass the scale found in Sweden nor is it tinged with genius. Switzerland has produced many world famous artists and architects; and among them was Le Corbusier, who emigrated and found fame elsewhere. This is not to say that the Swiss discourages talent, on the contrary, it is a law that every Swiss school have some original art work and industrial design is given every encouragement by the well known Swiss WERKBUND, with department stores as well as museums constantly pushing "good" design.

Competitions are held for almost all important Swiss public buildings, with the result that not only the best solution emerge, but also younger men have a series of opportunities, while the public is thus urged to take a keen interest in what is being built. It has been stated that the
quality of detail and construction in Swiss architecture is the highest in the world, and that the buildings improve with age.

Architecturally at the exhibition, many of the buildings looked as though they were meant to be permanent; and some of the others had the feeling of permanent buildings with a little exhibition detail stuck on. The "joie de Vivre" group designed under the direction of Ernst Gisel was the high spot of the exhibition: it was a market place, complete with church, and cafes, and with all the "townscape" tricks taken, such as the careful enclosure of Alpine views and the undulating made-up floor surface, covered with hexagonal slabs which made it look "centuries old."

Ian Marin commented that, "It seems a minor tragedy that with so many terrible town centers being built, this one is bound to disappear." In the end, perhaps the most Swiss thing in the exhibition was an ordinary suburban house, embedded between the Industry and Earth pavilions. The owner refused to sell out, and since the Swiss government had no compulsory purchase rights, the owner remained, and the house sat through the fair with visitors scurrying past. In a sense, Expo '64 was worthy rather than spectacular.
6. "MAN AND HIS WORLD" (EXPO '67)  
MONTREAL WORLD EXPOSITION 1967

An Experiment In The Planning Of Urban Space

Canada, the United States' rugged northern neighbor, flexed her muscles and invited the nations of the world to join her in the celebration of its 100th anniversary as a nation. This was to be a year long affair with the Montreal World Exposition as the primary event.

This bi-cultural nation was sponsoring its first world's fair and its main concern was to avoid the blatant commercialism and design gimmickery of the New York World's Fair of 1964-65; they did not want to imitate nor duplicate its "image" at Montreal. Therefore, Expo '67 was the beginning of the transformation of official and professional attitudes about the role and purpose of a world's fair in our contemporary civilization.

This attitude originated at the Montebello Conference, and this conference can be credited with the success, if any, of Expo '67 as a large-scaled urban environment, planned from scratch at a point in time. The broad range of people invited to the conference was a significant first step in the planning and organizing of Expo '67. The executives who were taken from the ordinary world of the army, diplomacy, business, suddenly found themselves trying to discuss the most important problems of the twentieth century; and, the Theme that emerged from this conference was reflective of the core of idealism that this meeting produced. They chose "Man and his World" to express their desires to produce an exposition where there would be an attempt made to identify and expound major problems on a world wide scale, with the minimum of intrusions by the nationalistic and private enterprise systems.

The most visible results of this conference was the idea of "Theme
Pavilions'; although this idea may appear to be superficial, its basic aims were in contrast to the very idea of national pavilions which forces everyone into attitudes of rivalry. Therefore, the Theme Pavilions were meant to encourage shared interests of an "international community".

It was also the Montebello Conference that initiated the idea of Habitat, as an urban housing experiment. Although Habitat was severely criticized, the government and the Expo officials allowed Safdie to build his "approach" to the housing of urban masses, using the pre-fabricated technology of mass produced components. Reyner Banham exclaimed that Habitat '67 was a student thesis that got built at full scale. This is true, but even so, it could have only happened at a fair. In the real world, there is little money and support for needed experiments of this nature, and the officials of Expo recognized its significance and therefore encouraged and allowed its realization. This is not to say that Habitat was a tremendous financial or planning success, but its importance lie in its role as a point to move from; thus if we can learn from the mistakes of Safdie, then Habitat was worth the effort.

Two other major concepts that emerged from the conference was to use the Critical Path technique in building the fair, and Operations Control for the running of the fair, which reflected the concerns of a socialistic government towards the organization of a major cultural institution.

The Critical Path is not new to the building and construction industries, but the job to build Expo successfully, virtually demanded its usage; the facilities for 400,000 people to spend the day had to be constructed in three years on a series of unconnected sites, none of which had anything to commend them except the possibility of their visual appeal
when they were finished.

To facilitate the process, the C.P. was divided into four levels; first, seven geographic areas; secondly, the individual large contracts, such as a pavilion or a service facility; thirdly, the subcontractors to each prime contract; fourthly, the suppliers. Data for the whole system was reported in each week, from which the computers produced four reports. The first C.P. was all block-time, with a finishing date and nothing else. Subsequently, block-time was replaced by realistic time, using accurate construction durations, and as each item was completed, it was removed in the next updating of the C.P., so on the last day, the C.P. reverted to its initial blank state.

The same sense of control which was successful in producing Expo on time, was translated into a form of "benevolent despotism", for the running of Expo. On the Ile-St.-Helene, was the "Operations Control Pavilion", to which all divisions of Expo reported any changes or defects in their plans. When crises were reported to Operations Control, it decided which other branches of Expo that should have been informed, and it also acted as a clearing house for all information. It also had a "situations room" that was equipped with screens listing all the daily activities of Expo; tv monitors were linked to 16 cameras fixed at key positions on the site, and to four mobile camera teams that could be directed to any trouble spot. Outside of crisis management, Operations Control also acted as a "good hostess", if the situations room saw a bottleneck on the site, the "gallant" Expo Band was ordered into action to siphon off some of the crowd; or if an area of the site looked dull, a mobile pop-group was driven over to liven up the proceedings.
One other aspect of Expo '67 as a reflection of a "total environment", was its use of mixed-media, embracing film, art, music, and sounds of many kinds; never before had the visitors' eyes and ears been exposed to such an incessant bombardment by audio-visual artillery of every power range and caliber. The viewers were set in motion among the motion pictures, they were made to walk on ramps or to watch from moving platforms. There were multiple screens of unusual shapes, 360° screens surrounding the viewer, fragmented screens, and three dimensional screens that advanced and receded. Movies were combined with slides, color with black and white, live action with drawn animation, films with live actors. The multi-media approach at Expo '67 has had a widespread influence on the uses of film and sound as informative tools. This has been an affirmation of the philosophy of one very famous Canadian, Marshall McLuhan, who preaches that the "medium is the message".

At Expo '67, there was an opportunity to offer lessons about the purpose of a city based on co-ordination and the technology that could be used to achieve this end; although the difference between Expo '67 and a real city is a result of the powers that the central authority can take in itself.

At Expo '67, this meant that the city was a total system; in which for example, all transit facilities were under one control and that the "infrastructure" was the framework for in which there were allowed possibilities for "individual expression" on the part of the participants. Since Expo was set up from scratch, meant that the usual administrative divisions were not present, although branches were created, they were all under the control of the Expo Corporation. It was thought, in the planning of Expo that in a normal city, there is no one on the side of "us".
7. "PROGRESS AND HARMONY FOR MANKIND" (EXPO '70)

OSAKA WORLD EXPOSITION 1970

A Symbolic Tree And The Soft Environment

After World War II, Japan as a nation suffered from an inferiority complex and she had to restore her self confidence; the Japanese people being resourceful and persistent overcame this obstacle and began to assert their new found power as a super industrial nation. Therefore, today, Japan is a nation of contrasts; booming industry thrives amid temples and traditional Japanese culture. It is also an eastern nation with strong western overtones. These and other contradictions make it one of the most interesting places in the world, a land of continued excitement and tranquility; thus Expo '70 is a product of this ever changing society.

In discussing Expo '70, Robin Boyd stated that,

"The atmosphere of Japan encourages exhibitionism. No country has a greater divergence between the taste of its sophisticated architects and that of the unsophisticated masses led by American-oriented ad-men. Science fiction design spills out of the Japanese movie and television screens to shape much of the pop scene with spheres, stripes, and chrome-plated craziness. Whatever the cause, most of the conspicuous exhibition buildings at Expo '70 fall into two quite distinct categories, sophisticated and naive, but each in its way looks as if it has been calculated to please the mad scientist. The pattern created by the schizophrenic professor is set right at the beginning in the centre of the giant Festival Plaza. Kenzo Tange's stupendous space-frame, with its pneumatic plastic roof and random plug-ins, makes one statement. Then the huge hollow display sculpture, which is called the Tower of the Sun and rears one of its two heads through a hole in Tange's roof, contradicts it. The plot of Expo '70 immediately becomes apparent. It is a conflict between the order of monolithic sculptural concepts and the calculated confusion of semi-suspected scientific systems—a visual conflict, in short, between the mad scientist's monstrous end-product and the incomprehensible laboratory equipment with which he has made it."  

In earlier competitions for the design of the fair, there were many proposals reviewed, and among them were quite a few mega-structures, that would have housed the whole fair under one roof. This design trend was
somewhat popular in the 'sixties, when it was considered by many architects as "the" solution to urban design. Therefore, Tange's concept and approach is a more relevant attempt in trying to solve the problem of diversity within an ordered framework.

The planners at Osaka felt that the most important factor of a city is the human being, and the dynamics of human life; therefore, their attempt was to embody the kaleidoscopic relations between humans as the major event at Festival Plaza. It was also expressed by them that this approach based on people interaction should be one of the key factors in the shaping of concepts for the planning of future new cities.

Tange's concern for a software environment was an indication of the direction for future fairs also. The soft environment stresses the software aspects of space modification rather than hardware solutions. This meant the creation of spaces where people can get together as "people", to exchange non-physical aspects of their culture such as wisdom and tradition rather than pure industrial technology.

In stating his views on how he arrived at the concept, Tange reflected that,

"Thus, although the line of thought itself is soft, when realized in terms of the tree trunk and branches of the basic facilities, it takes the form of hardware. From the beginning of the sixties till the middle of the decade, I thought of cities in terms of structure, in Tokyo Plan, 1960, and many other urban projects I thought of urban design as a matter of providing a fairly hard structure; and the network of the Expo trunk facilities may well be a reflection of this approach, though after thinking about its particular meaning and content, I wish I had been able to produce something freer and softer".

It was felt that the master plan of the grounds could be effectively realized on the "urban scale", and after the fair, the site of Expo '70 was to become the nucleus of a new city, using the facilities of the fair as the town center.
PART III. THE PROPOSED BICENTENNIAL COMMEMORATION AT PHILADELPHIA 1976

BACKGROUND

The world exposition being planned for 1976 is in large measure being shaped by the needs and concerns of an urban society and a world beset with international tension.

Therefore, the idea of the fair as both symbol and artifact is in the process of being "re-invented" to make it meaningful and relevant in spiritual and physical terms, in order to accommodate the demands upon it as an institution. However, it remains to be seen as to what the ultimate outcome of this venture will be.

Its organizers feel that this period in history is both a watershed and a turning point for the society and the fair, and that the fair must respond in a manner befitting its role as a viable social institution and as an environmental artifact. Therefore, with a knowledge and an awareness of all previous world's fairs, the sponsors and organizers of the Bicentennial Commemoration set out to break with tradition. The two more recent fairs (Expositions '67 & '70) they felt, only scratched the surface of relevancy in being expressive of this era and of the role an exposition should play in our contemporary civilization.

INCEPTION AND DEVELOPMENT

The exchange of ideas basic to the holding of an exposition in 1976 was begun in 1957, when former Mayor Richardson Dilworth of Philadelphia and concerned citizens initiated the idea that the Bicentennial would provide a challenging opportunity to better living conditions for "thousands of people". To make this idea a successful one, Mayor Dilworth recognized the need for youth and innovation, and therefore, requested the Junior Chamber of Commerce to initiate Bicentennial planning groups.
throughout the region. Their activities were integrated with the efforts of public and private agencies to set 1976 as a deadline for the completion of "historic projects"; and in 1964, the City Planning Commission, at the request of Mayor James H. J. Tate, developed the first Bicentennial plan.

The publication of this plan introduced a new phase of activity, including the appointment of a Committee of 200 by the Mayor, the establishment of a committee to reconstruct the house where Thomas Jefferson wrote the Declaration of Independence, the commission of Leonard Berstein to write a Bicentennial festival piece; and a study by the Stanford Research Institute that ultimately proved that Philadelphia could be a successful host to an international exposition. Mayor Tate then announced that the complete refurbishing of Memorial Hall, the only building remaining from the Centennial Exposition of 1876, would begin the Bicentennial preparation.

The Philadelphia 1976 Bicentennial Corporation was formed in 1967 to co-ordinate and formalize the many citizens' interest groups, and based on the proposals of eight of these groups, the Corporation formed the official program, adopted in March of 1967. Although this program was adopted, many citizens felt as though it was not enough; therefore, new groups were formed and new proposals were made. Among these was a new comprehensive plan for the whole city, on the other hand, the City-Wide Black Community Council questioned the entire concept of the Bicentennial Commemoration.

On December 13, the "Black Friday" of 1968, the City-Wide Black Community Council presented its position on the role and status of the black man in this society, past and present, and what the future could
hold if the potential of minority groups are fulfilled in Philadelphia and throughout the world.

The proposal put forth by the City-Wide Black Community Council stated that, "in view of today's bitter realities human values must take priority"; and they also added that if the United States Bicentennial concept was based upon human rights, both the external and internal symptoms of alienation in America's minority groups would disappear.

The impact of this message was loud and clear, and the ensuing discussion and debates created a situation of thinking, planning, and action unique in Philadelphia, and perhaps in any American city. Therefore, this turn of events prompted one official to exclaim that, "The Bicentennial program of Philadelphia represents not the imposition of the ideas of the few on the many, but rather decisions being made by citizens from all the communities and interests of the city. For Philadelphia, the Bicentennial is already under way. The establishment of goals through equal participation of all people is gathering momentum now that it has been proved that total involvement in the Bicentennial is acceptable and desired."

The catalytic influence of the proposal put forth by the City-Wide Black Community Council, which forced the Bicentennial Corporation to re-evaluate the aims and objectives of the Bicentennial program which signaled a new dimension in the real meaning of the concept of "citizen participation" in the planning process. The realities of the "urban crisis" has demanded that people must listen to each other, and the idea of listening to all elements that will be affected by an act of environmental change within a community must be realized on a much broader scale if we are to continue to have a society of "neighbors" and not one of enemies. Therefore, it is in this framework of community involvement
that Philadelphia is trying to make the Bicentennial Commemoration an exposition and an environment for "all the people". Can the city of "Brotherly Love" live up to its motto?

**A PLAN FOR PLANNING**

"The review of the past and confrontation with the present should set the stage for the exploration of the future." With this thought in mind, the Philadelphia 1976 Bicentennial Corporation has determined that the Bicentennial should provide a focus of energy and action to go far beyond the commemoration of the founding of the Nation; therefore, it was felt that an appropriate celebration should include a full range of history and achievement over 200 years and should encompass all 50 states. As a result of these considerations, the Corporation proposes that the celebration give equal emphasis to three aspects: a National Historic Celebration, an Agenda for Action focused on current problems and an International Exposition focused on the future.

The historic review and the Agenda for Action is intended to be coordinated in a national Bicentennial program. The meaning of each significant event and place in the development of the country would be recalled and renewed, not only in the original thirteen colonies, but in all sections of the country. The prime focus of the Agenda for Action would be to create a forum for discussion and experimentation with a commitment toward making substantial progress in the correction of major domestic problems by 1976; this effort would concentrate on the improvement of the social and physical urban environment where many of the domestic problems are "most acute". Such an undertaking would represent the pluralistic nature of our society and the equality of participation inherent in the democratic process.
The Corporation further proposes that the Bicentennial, through the International Exposition, should break with previous world fair tradition and initiate new directions more relevant to "our times".

The possible new directions of the Bicentennial as an international exposition could take are outlined as follows:

NEW THEMATIC FOCUS

The most appropriate focus for the new kind of exposition is the interaction of people and the exchange of ideas and goals: The emphasis will be on people not technology.
The purposes of the exposition will be:
1. to create a greater understanding and acceptance of differences among peoples of the world;
2. to explore common goals and study problems blocking their attainment;
3. to initiate cooperative efforts to solve those problems and achieve those goals.

NEW PLANNING PROCESS

The main thrust of this idea is that since this will be an international exposition, the United States should not develop a program alone, and then hand it to the rest of the world. The intent of this process is to bring together people from around the world, both by communications networks and in person, to allow them to develop common concerns and break down nationalistic orientations that have limited former expositions. International teams of social scientists, artists, educators, designers and others will begin the work. Models for such activity can be found in the work of the International Geophysical Year and, in embryonic form, the planning of the theme pavilions at Expo '67. Another aspect would be to utilize UNESCO and other such international organizations that have been ignored by past expositions.

NEW PROGRAM OPTIONS

To give the less industrialized and smaller nations of the world a sense that in this project, their contributions carry an importance and a dignity equal to that enjoyed by the most sophisticated and prosperous nations, new program options are being considered that will if implemented make this a unique exposition indeed. It was stated that the exact form of the options could only come from the new international planning process, but five basic ideas were suggested:
1. Display of Cultures
   Basic to understanding among peoples of the world is a recognition and acceptance of diversity; therefore, the emphasis will be on people, their aspirations and problems, and not on hardware or scenery.
2. Display of Common Goals and Problems
   Space will be available to join with other nations in a study of man's activities, grouped on the basis of common goals or problems.
This concept comes directly from the theme pavilions of Expo '67, where, for example, there was a display featuring polar exploration and development of the polar environment, shared by the United States, the Soviet Union, Canada, and Sweden.

3. Display of Performance

The shift in emphasis from technology to people will bring about the most extensive performing, plastic, visual, and multi-media arts program conceived. There will be tours of great companies, as well as programs featuring young innovative artists. Folklife festivals will serve as natural adjuncts to the display of cultures and will involve ethnic groups throughout the United States.

4. Demonstration Projects

Even more basic to the ultimate purpose of the exposition will be special demonstration projects which must be developed in the international planning process. These activities will identify environmental problems of common concern and explore prototypical ways of approaching a diversity of solutions. The intention is to arrange for the construction of special projects of a permanent nature, such as housing, schools, transportation systems, that will be distributed throughout the host city, or the entire country.

5. The Interaction of People

The emphasis throughout the exposition will be on programs dealing with people rather than traditional exhibits. All nations will also be required to designate average citizens to come to the world community as exchange ambassadors from their respective countries. While this form of participation is an innovation for international expositions, it has a firm foundation in many current international programs, such as the Experiment In International Living, the Eisenhower Exchange Fellowships and other cultural exchange programs.

It is felt that through these means, the Bicentennial Commemoration can demonstrate that "the way of doing things" is as important as "what is done".

ENVIRONMENTAL CONSIDERATIONS

1. Site Proposals

Three focal site were selected to respond to the thematic emphasis on the past, present, and future, the parallel implications of the national celebration, the Agenda for Action, and the International Exposition. These three separate sites were chosen to take advantage of the resources of the city, including its two rivers, the Delaware and the Schuylkill; the largest urban park in the country, Fairmont Park; and the unique conflux of major East coast transportation, represented by
Interstate 95 and the high speed Metroliner.

The sites were separated, so as to enable the permanent benefits to be distributed throughout the city and minimize the impact of the Exposition on any one area and to maximize the potentials of each.

Therefore, the new development activities will take place where they will:

1. reinforce existing private development and public improvement programs, such as Model Cities and Neighborhood Improvement areas;
2. provide permanent benefits where they are most needed; and
3. act as meeting places between different sections of the city.

It is also felt that the three site approach relates each exposition site scale to manageable day's experience for a visitor. The Main Exposition Sites are as follows:

1. **Penn's Landing/Camden Riverfront**
   Focus Of National Celebration
   This site is located on the east and west banks of the Delaware River; and the site at Penn's Landing is directly adjacent to Independence National Historic Park. Both sites present the opportunity to reclaim a major portion of the Delaware riverfront for public use, through two proposed development programs. In Philadelphia, Penn's Landing will provide locations for major thematic national exhibits as part of an international trade center in conjunction with the headquarters of the Port of Philadelphia. Waterfront recreation activities and museums are planned to supplement the exhibition areas and they will become part of the permanent facilities already planned, which includes the National Science Museum and the Pennsylvania orientation center for visitors. An amusement and entertainment center will be located along the Camden Riverfront. Other exhibits and demonstrations will feature national and international corporations and the achievements of industry and technology, the Exposition's one concession to the old tradition. This site will be connected to central Camden by new transit systems and to Penn's Landing by special water transportation.

2. **North Philadelphia Station**
   Focus On The Urban Environment
   The site of the urban focus, is presently a combination of underdeveloped land and air rights surrounded by decaying residential and industrial areas, which the planners feel offers an unusual opportunity to create a new human environment with in the structure of the city. This area is one of the most accessible in the region, being served by regional transportation systems and a highspeed rail line. In this area are also important regional institutions such as Temple University.
Adjacent to the substantial Model Cities area, the site can become an important educational, commercial and cultural area that will bring physically and socially separated parts of the city together. As a primary focus of the national concern for the urban environment, this center will illustrate imaginative approaches to both physical and social problems. These programs will be undertaken by new combinations of private and public investors, with emphasis on local entrepreneurship and development by community based organizations.\(^3\)

3. **THIRTIETH STREET STATION**

*Focus On The International Exposition*

The international focus is being placed over a high speed rail line and the main station of the Penn Central Railroad to take advantage of a unique opportunity in the exploration of new systems of land and air right development. The area is comprised of two hundred acres of "under-utilized" space near the center of the city, adjacent to the University City Science Center, the University of Pennsylvania, the Civic Center, Fairmont Park, and the Art Museum. This site is also close to low and middle income neighborhoods which presents a diversity of opportunities ranging from the development of a megalopolitan commercial and institutional center for Philadelphia, New York and Washington, to the provision of new housing and local community services. The major component of international exhibition space will be this site where there will be displays of cultures, thematic displays of goals and problems, and the primary conference center. It is felt that by exploring the development of high density flexible space, the Exposition will generate the first phase of an important regional center of permanent benefit to the city. As a prototypical exploration of the use of air rights, the experiment will also be relevant to the interests of other cities throughout the world.\(^9\)

2. **Urban Design Proposals**

David A. Crane, the Principal Consultant for Physical Development for the Bicentennial, stated that, "In presenting a conceptual proposal for Bicentennial development, we are mindful that it breaks with many exposition traditions and emphasizes urban design and community action concepts which are quite unorthodox in relation to existing national approaches. Bicentennial development should be at the forefront of these new directions. We feel justified in the scope of the proposals because of Philadelphia's proven strengths and capacities for community improvement, and a lesser approach would not be worthwhile, would not attract support and would not prove feasible."\(^10\)
The proposed conceptual approach to the Bicentennial not only meets the broad objectives expressed by civic proposals but affords many opportunities to set national and international precedents in urban design and development. While these opportunities do not offer a universal panacea, nationally or locally, they are worthy frontiers to which the Bicentennial should aspire. The proposals are as follows:

1. DEVELOPMENT OF "SEAM AREAS"
Bicentennial development will attempt to lend support and encouragement to the regeneration of existing neighborhoods through the construction of large-scale community improvements by utilizing underused and unoccupied sites which exist as barriers or blighting influences on the edges of the built-up communities. Developments in these "seam areas" can offer racially and economically integrated housing in unique combinations with schools, recreation, health, and similar services for the adjacent neighborhoods in large quantities without displacement of families, and can contribute to social stability and relocation of resources in the inner-city. While adding to the diversity of community improvement programs, development of seam areas will begin to bind together presently separated portions of the city, foster broader social interaction between people, inject new investment into deprived areas, and provide for a wider range of needs including those of more affluent citizens who have been leaving the city in favor of the suburbs.

2. THE ARCHITECTURE OF PUBLIC PLACES
For over fifty years, architects have conceptualized new possibilities of public place design with such concepts as "mega-structure," "multi-mode" transportation centers, pedestrian "streets in the sky," weatherproofing of whole city areas, adaptable space for multiple and changing uses, or "plug-in" building systems. While these ideas have had piecemeal application, they have mostly remained on the drawing boards, and therefore, they have never been assembled in a comprehensive demonstration of how the contemporary urban center might be formed. Just as Paxton's Crystal Place established a whole new iron and glass movement in architectural design, the Bicentennial is attempting to bring to fruition long-discussed, seldom-realized environmental design innovation. The creation of large, multi-purpose "indoor-outdoor" spaces for all times and seasons is a specific challenge for Bicentennial sites development. The exposition focal points will have both 1976 and permanent need for spaces to accommodate crowds and events such as exhibits, meeting places, public ceremonies, amusements, and other activities best described as "people-watching". Tange's Space Frame at Expo '70 was an approach in this direction, but at Philadelphia this concept will be carried through and attempted on a much broader scale. Economy will require flexible design enabling constant and intensive uses of each facility. The challenge is to create bold and generous structures with provision for both natural light and darkened conditions. It is
also stated that large and small spaces of varied special character should be interrelated and conveniently connected by sheltered concourses to transient and visitor facilities, commercial services, transit and parking.\textsuperscript{14}

3. **SPACE DESIGN FLEXIBILITY**

The orderly and constructive facilitation of future growth and change beyond 1976 is a related challenge. In all major developments, there will be a need to create spaces which can be inexpensively and commodiously adapted for post-1976 uses; the continuing nature of urban change suggests that this of conversion will not stop in 1976. To meet this challenge of change, the design intent will be to utilize as flexible as structures as possible with no particular qualities to ease the transition for future space conversions without large environmental cost. By identifying sequences of different uses over time which require similar architectural character, services, and economics of space, 1976 facilities can be designed to enable easy adaptation for permanent uses. However, flexibility should not be gained at the expense of well-designed and integrated connections between buildings at all stages of development. It is stated that, the typical spectacle of vast, internally-complete towers resting upon an undersigned and inhumane street level should not be perpetuated in Bicentennial sites development.\textsuperscript{15}

4. **PARTNERSHIPS FOR "SHARED STRUCTURES"**

Joint development in "shared structures" can offer new ways to overcome rising obstacles to urban renewal and public improvements and can offer private developers new ways to make a public contribution within a profit motive framework. Development of schools and other public buildings conjointly with commercial, transportation, and high density housing can eliminate the problems inherent in separate development agencies and development of schools and other public buildings conjointly with commercial, transportation, and high density housing can eliminate the problems inherent in separate development agencies and procedures, rigid site and building standards involving inefficient land use, and high construction cost. Therefore, the Bicentennial can be used for a few experimental public-private developments to engender joint development standards which can be more widely applied to capital programs of the inner-city in future years.\textsuperscript{16}
SITE PROPOSALS
FOR THE
BICENTENNIAL 1976
1. penn's landing
2. north philadelphia station
3. 30th street station
A DESIGN PROPOSAL FOR
PENN'S LANDING
(David Crane, architect)
Proposed Bicentennial
Philadelphia, Pa. 1976
2. NORTH PHILA. STATION

A DESIGN PROPOSAL FOR THE
NORTH PHILADELPHIA STATION
(David Crane, architect)
Proposed Bicentennial
Philadelphia, Pa. 1976
3. 30th STREET STATION

A DESIGN PROPOSAL FOR THE
30th STREET STATION
(David Crane, architect)
Proposed Bicentennial
Philadelphia, Pa. 1976
AN APPRAISAL

Since its inception during the Industrial Revolution the international exhibition has undergone many changes in scope and magnitude; but if the efforts being put forth in Philadelphia for the Bicentennial Commemoration are realized, this could be a truly "breakthrough" exposition and a new beginning for the world of world's fairs.

All nineteenth century world's fairs concentrated on the fruits of industrial production, and the "Hall of Machines" was always the most spectacular structure and the focal point of the fair. The industrial exhibits were divided, subdivided and judged in numerous categories, and eminent experts awarded prizes to the outstanding products. Foreign governments sent official observers to report in detail on the latest technology and products on exhibit, but today a manufacturer or an engineer would not visit a world's fair to learn of new developments in his field; for that purpose he would visit a trade fair or a professional convention which grew more numerous and highly specialized every year.

When only the rich could travel abroad, the world's fair was a unique opportunity for the common man to see something of the rest of the world, but air travel, magazines with color photographs, movies and television have all diminished the former role of the world's fair. Therefore, to survive in the twentieth century, the world's fair had to change its character sharply; the emphasis has shifted from Business to Leisure, from Trade to Tourism, from Industry to Information, from Products to Propaganda.

The changes that the fair have undergone were all generated by establishment attitudes, making themselves manifest in the physical and spiritual environment of the fair through the interpretation of professional
values.

At this point in time the fair is at a crossroad and Robert Venturi and Denise Scott Brown state that, "International Expositions and Fairs traditionally offer the world an amalgam of national aspirations, economic boosterism, gaudy self aggrandizement and innovative architecture. Recently added to these have been high sounding themes that begin 'Man and ...', and a concern on the part of city fathers to use these occasions to manufacture urban realestate for later sale to developers... How much more difficult at this decisive point in our history for Americans to talk of Man. We shall be castigated by the nations of the world as Franz Fanon castigated the Europeans: 'They are never done talking of Man yet, murder men everywhere they find them.'" 17

The Venturi's statement is clear, the message is plain, and the sponsors of the Bicentennial Commemoration realized its implications. Therefore, the sponsors feel that the major thrust of the exposition should be people oriented rather than an emphasis on technology and hardware.

This attitude is reflected in the "New Thematic Focus" which states that, "The most appropriate focus for the new kind of exposition is the interaction of people and the exchange of ideas and goals... The activities and the environment of the Exposition will be designed to encourage informal exchanges between people, no matter what their initial reasons for coming to the Exposition." 18

We have a war here against social injustice, poverty and prejudice; therefore, themes for today should be specific, immediate and urgent, like a letter from the front.

If by 1976 we cannot present to the world a war half won, then we should be ashamed to commemorate the Bicentennial. If on the other hand,
we adopt the modest theme of "House in Order by 1976" with the stupendous
task it involves, the nations will flock to our shores in that year both
to see and to help, and we shall earn from the world a respect that no
amount of foreign aid or military strength could command. Without fan-
fare, the universal meanings will emerge: America and the world are "man"
not "Man", and it is good to live in a pluralistic society.

Along with the "people" trends of this proposed exposition, the
strong urban design emphasis of the Bicentennial Commemoration also re-
presents a new era in the concept of the fair as an environmental artifact.
Because the needs are serious, the built Commemoration should do as much for
the city as possible. This is a direct challenge to the ingenuity of the
architects and planners as designers and problem solvers.

The Exposition as proposed, on three separate sites, could be a po-
tential-liability to the city if not handled properly; so what we see in
planning proposals is an effort to "weave" and "superimpose" a trifocaled
institution into existing urban fabric of Philadelphia. There is a recog-
nition on the part of the planners to lessen the total impact of the fair
as much as possible, and to maximize the benefits to all involved to a
greater degree.

By attempting to integrate economic, social, and cultural factors in
to the initial planning efforts, the planners were trying to offset the
potential liabilities of a totally physical plan. In many recent re-
development projects, planners have completely ignored the social impli-
cations of their physical proposals and in many cases have accelerated
the ills of the urban poor and underclasses. As an institution the pro-
posed Bicentennial Commemoration is attempting to bring in "the people"
and let them share in the cultural and economic aspects of the overall
program. There may be no Crystal Palaces, Eiffel Towers, or Atomiums, but hopefully the monuments will be understanding, tolerance, and meaningful interaction, the real needs of a society beset with fear, prejudice and ignorance.
INTRODUCTION


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# A CHRONOLOGY OF WORLD'S FAIRS AND EXHIBITIONS

<table>
<thead>
<tr>
<th>DATE</th>
<th>EXHIBITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1851</td>
<td>The Great Exhibition of the Works of Industry of All Nations, London, England</td>
</tr>
<tr>
<td>1853</td>
<td>The World's Fair for the Exhibition of the Industry of All Nations, New York, U.S.A.</td>
</tr>
<tr>
<td>1855</td>
<td>The Universal Exhibition, Paris, France</td>
</tr>
<tr>
<td>1862</td>
<td>International Exhibition, London, England</td>
</tr>
<tr>
<td>1867</td>
<td>International Exhibition, Paris, France</td>
</tr>
<tr>
<td>1873</td>
<td>International Exposition, Vienna, Austria</td>
</tr>
<tr>
<td>1876</td>
<td>Centennial Exhibition, Philadelphia, U.S.A.</td>
</tr>
<tr>
<td>1878</td>
<td>International Exhibition, Paris, France</td>
</tr>
<tr>
<td>1879</td>
<td>International Exhibition, Sydney, Australia</td>
</tr>
<tr>
<td>1880</td>
<td>International Exhibition, Melbourne, Australia</td>
</tr>
<tr>
<td>1884</td>
<td>World's Industrial and Cotton Centennial Exposition, New Orleans, U.S.A.</td>
</tr>
<tr>
<td>1889</td>
<td>International Exhibition, Paris, France</td>
</tr>
<tr>
<td>1893</td>
<td>World's Columbian Exposition, Chicago, U.S.A.</td>
</tr>
<tr>
<td>1895</td>
<td>Cotton States and International Exposition, Atlanta, U.S.A.</td>
</tr>
<tr>
<td>DATE</td>
<td>EXHIBITION</td>
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<td>--------------------------------------------------------------</td>
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<tr>
<td>1897</td>
<td>Tennessee Centennial Exposition Nashville, U.S.A.</td>
</tr>
<tr>
<td>1900</td>
<td>International Exhibition Paris, France</td>
</tr>
<tr>
<td>1901</td>
<td>Pan American Exposition Buffalo, U.S.A.</td>
</tr>
<tr>
<td>1901-02</td>
<td>South Carolina Interstate and West Indian Exposition Charleston, U.S.A.</td>
</tr>
<tr>
<td>1904</td>
<td>Louisiana Purchase Exposition St. Louis, U.S.A.</td>
</tr>
<tr>
<td>1905</td>
<td>Lewis and Clark Centennial Exposition Portland (Oregon), U.S.A.</td>
</tr>
<tr>
<td>1907</td>
<td>Franco-British Exhibition London, England</td>
</tr>
<tr>
<td>1908</td>
<td>Jamestown Tercentennial Exposition Hampton Roads, U.S.A.</td>
</tr>
<tr>
<td>1909</td>
<td>Alaska-Yukon Pacific Exposition Seattle, U.S.A.</td>
</tr>
<tr>
<td>1910</td>
<td>International Exhibition Brussels, Belgium</td>
</tr>
<tr>
<td>1915</td>
<td>Panama-Pacific Exposition San Francisco, U.S.A.</td>
</tr>
<tr>
<td>1915-16</td>
<td>Panama-California Exposition San Diego, U.S.A.</td>
</tr>
<tr>
<td>1924</td>
<td>British Empire Exposition Wembley, England</td>
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<td>1926</td>
<td>Sesqui-Centennial Exposition Philadelphia, U.S.A.</td>
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<td>DATE</td>
<td>EXHIBITION</td>
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<tr>
<td>1933-34</td>
<td>Century of Progress</td>
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<tr>
<td></td>
<td>Chicago, U.S.A.</td>
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<td>1935</td>
<td>Brussels Exhibition</td>
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<td>Brussels, Belgium</td>
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<td>1935</td>
<td>Californiz-Pacific Exposition</td>
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<td></td>
<td>San Diego, U.S.A.</td>
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<td>1936-37</td>
<td>Centennial Central Exposition</td>
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<td></td>
<td>Dallas, U.S.A.</td>
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<td>1936-37</td>
<td>Great Lakes Exposition</td>
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<td></td>
<td>Cleveland, U.S.A.</td>
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<tr>
<td>1939-40</td>
<td>The World of Tomorrow</td>
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<tr>
<td></td>
<td>New York, U.S.A.</td>
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<td>1935-40</td>
<td>The Golden Gate Exposition</td>
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<tr>
<td></td>
<td>San Francisco, U.S.A.</td>
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<tr>
<td>1951</td>
<td>Festival of Britain</td>
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<td>London, England</td>
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<td>1958</td>
<td>Brussels World Fair</td>
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<td>Brussel Belgium</td>
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<td>1962</td>
<td>The Century 21 Exposition</td>
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<td></td>
<td>Seattle, U.S.A.</td>
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<td>1964</td>
<td>Swiss National Exhibition</td>
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<td>Lausanne, Switzerland</td>
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<tr>
<td>1964-65</td>
<td>New York World's Fair</td>
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<td>New York, U.S.A.</td>
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<td>1967</td>
<td>World Exposition</td>
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<td></td>
<td>Man and His World</td>
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<td></td>
<td>Montreal, Canada</td>
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<td>1968</td>
<td>Hemisfair</td>
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<td></td>
<td>San Antonio, U.S.A.</td>
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<tr>
<td>DATE</td>
<td>EXHIBITION</td>
</tr>
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</table>
| 1970 | World Exposition 'Progress and Harmony for Mankind
Osaka, Japan |
| 1976 | Bicentennial Commemoration (proposed)
Philadelphia, U.S.A. |

NOTE: In addition to the fairs and exhibitions listed above, other outstanding exhibitions have been held in such places as Omaha, Dublin, Edinburgh, Manchester, Glasgow, Rio de Janeiro, Milan, Stockholm, Laibzig, Antwerp, Barcelona, Berlin, Florence, Frankfurt, Rome, and other cities throughout the world.