

Organization of Growth Patterns of Control in SOM's Suburban Office Parks 1948-1970

ANDREW VRANA
University of Houston

The suburban office parks designed by Skidmore, Owings, and Merrill are an essential catalog that manifests the dynamic changes that were reorganizing the cities and workplaces of the United States during the post-war era. These buildings exemplify the techniques that corporations were employing to control societal processes and channel them into offices that could utilize the work force with the highest possible efficiency. The goal of this was to foster the growth of a corporate/suburban complex that would provide a site for a new type of social organization that was afforded by more expedient flows of information and transportation through the refinement and expansion of automobile infrastructure, office systems, and information technologies. These offices relocated the work environment of the metropolitan central business districts into horizontal nodes within a national information network.

Corporations were leaving the congestion of large cities in order to take advantage of the new space that was being mapped outside of the traditional limits of information and transportation. This shift in development necessitated an entire restructuring of society in the suburbs around the organization itself. This was the site where William H. Whyte's Organization Man was constructing a new community around the relocated corporate office. One of the essential characteristics of Whyte's figure was his mobility that enabled him to uproot himself and his family and move anywhere. The goal of this movement was to find the best possible employment. Developers and corporations were starting to realize the need for a total ready-made society that would instantly provide the necessary ingredients for a community. The Organization Man met others like himself who were there only for the Organization. (Whyte, p. 267-280)

The emerging corporations involved in the production of the new transportation and information technologies were the first to establish themselves in the suburbs. It was the site for the new Information Society that was growing at an accelerated rate

after the end of industrial dominance after the war. The Information Society is involved with the production and distribution of knowledge. The importance of such practices as education, research and development, communication media, information machines (computers), and information services (finance, insurance, and real estate) began to emerge during this time of change. With the increase in efficiency of transportation and information flows, these services could be dislocated from the metropolitan centers and reestablished anywhere. The effect of this was a decentralization of urban and economic structures. It produced new typologies of inhabitation, commerce, and transportation. Suburban office parks, housing enclaves, and shopping malls provided the total environment that could be planned and executed at an unprecedented rate and scale. Freeways that were built to relieve urban congestion became the root of these developments. The automobile became the standard mode of mobility and parking accommodation became a significant issue. With these ingredients developers and corporations could deploy organized and integrated live/work communities almost anywhere.

The concentration in this case is the suburban office park and its development by SOM from 1948-1970. Namely, *Ford Administrative Center, Dearborne, Michigan, 1948; Connecticut General Life Insurance Company Headquarters, Bloomfield, Connecticut, 1957; Emhart Corporation Headquarters, Bloomfield, Connecticut, 1963; American Can Company Headquarters, Greenwich, Connecticut, 1970*. These buildings exemplify SOM's innovative approach to designing purely to solve technical problems. The aesthetics of the project were understood as what emerged out of the process of organizing the corporate structure in built form. They were dealt with as factories of information. SOM designed them by using flow diagrams that studied the movement of personnel, paper, electronic information, and in some cases manufactured prod-

ucts in and out of the complex. Their internal organization was based upon a system that modulated each part into an integral piece of the whole. Externally they composed the landscape as an extension of the internal system and connected to the suburban infrastructure through site planning and parking provisions.

CONTROL OF GROWTH THROUGH ORGANIZATION

A crucial concept that was instrumental in the development of these buildings was how the expansion of the corporation was built into their structure. A major task of modern society (in this case, the corporation) is the management of its own growth. The technique for achieving this is the ability to exercise control on itself and its environment. Not unlike a living organism, the social body manages its total organization through the operations of its constituent parts and adjusting to exterior change. This influence extends to all possible ends, even outside of itself, in order to make them a part of a total organization. An organization is understood as an open system that is not driven by specific goals but by the larger purpose to foster its own growth. Here the relationship between organization and organism is elucidated by realizing that a living system is differentiated from the inorganic in that it can control itself and its environment in order to self perpetuate.

In the case of the corporate office, a system of feedback between the personnel and the management was maintained through the flexibility of the office components and the transparency of the spaces. These techniques liberated the worker to be as efficient as possible within a given space but always within the frame of managerial surveillance. The analogy to a living organism is evident in that the system is able to command and control itself on the minute scale of the sole employee making their own decisions in the corporate space. The building allows for spaces to flow into each other and agglomerate into larger groups. The permutations of the complex organization are calculated and made simple through a given set of instructions. This sort of technique operates on many different levels from the individual's desk up to the urban scale.

"The major intellectual and sociological problems of the post-industrial society are . . . those of "organized complexity: the management of large-scale systems, with large numbers of interacting variables, which have to be coordinated to achieve specific goals. . . An intellectual technology is the substitution of algorithms (problem solving rules) for intuitive judgments. These algorithms may be embodied in an automatic machine or a computer program or a set of instructions based on some statistical or mathematical formula: the statistical and logical techniques that are used in dealing with organized complexity

are efforts to formalize a set of decision rules." (Beniger, p. 20)

Office hardware became instrumental in the practice of control. The systems gained the capability of multiple configurations of workspace in order to optimize their potential for growth and change. This kind of intervention can be seen in the way the building related to the larger context of suburbanization. They were often the first step in the process of larger patterns of development. Corporations and developers had the capital and planning initiative to speculate on building in remote regions. Once the employment was established it generated the impetus for further growth in the housing and transportation sectors. This too was held open to allow for change and to have the resiliency to withstand fluctuating market forces. By harnessing all facets and scales of the environment, the system is able to regulate itself.

"Today the idea is called homeostasis, or equilibrium as a strategy of the staying power of any body. All organizations, but especially biological ones, struggle to remain constant in their inner condition amidst the variations of outer stock and change. The man-made social environment as an extension of man's physical body is no exception. The city, as a form of the body politic, responds to new pressures and irritations by resourceful new extensions – always in the effort to exert staying power, constancy, equilibrium, and homeostasis." (McLuhan, p. 98)

The extent of this concept permeates all aspects of the planning procedure from the freeways that provide the mode of transport for the new corporate entity down to organization of the office space.

ORGANIZATION OF VISION: THE MODULATED OFFICE

In modern architecture the corollary to the classical ordering devices of proportion and symmetry is the module. It originates more out of building practices that demanded similarity between building components. As industrial production made standardization and interchangeable parts more complex the possibilities of modulating vast amounts of space became possible. Within a differentiated environment, vision could be unified through a repeated combination of geometrical units. Simultaneous with this was the realization that common units could be interconnected among themselves. By the 1950's these ideas were fully mobilized and directed toward creating flexible offices. This was the site for the deployment of what Gyorgy Kepes called a "universal rhythm." He theorized modularity in architecture in relation to other trends in visual communication. In the case of these offices, the module was derived not from the overall structure of the building but from the internal spatial requirements of the individual worker. The optimization

of that singularity set the module for the whole system. All material organization emanated from a local spatial decision.

“The new knowledge . . . which has been gained from meeting practical needs has brought about a fundamental reevaluation of inherited notions about form. The abstract form idea imposed from above, unrelated to the properties of structural elements, has given way to the form-concept in which forms evolve from the roots up, emerging from the properties of the basic units.” (Kepes, p. 352)

This was more than a way to deploy standardization throughout the design. It was a technique to control the corporation throughout its life and to adjust to its subsequent transformations. The module permeated all surfaces and volumes to the point that site, building enclosure, interior partitions, and furniture components would be regulated by a similar system of measurement. The way the module was repeated differed according to how the corporation tailored its work environment. The completely open typology was becoming more prevalent as it became necessary to allow a steady flow of information between departments. Moveable partition walls were the major innovations in these projects. They allowed for fully flexible spatial configurations that were multiples of the basic module. Corporations could impose or diffuse their control and hierarchy through the activation of different office organizations. Office machines were integrated into the spatial matrix just as easily. The modulation created a unified visual and tactile field that provided a seamless connection across all materials in order to optimize communication between the personnel and machines of the corporation. A unified field is a device of control. By neutralizing extraneous noise in the environment, the corporation could focus the efforts of the worker and the machine on the task at hand.

ORGANIZATION OF MOTION: THE AUTOMOBILE AND SUBURBANIZATION

The critical mode of connection between the individual and the organization became the automobile. Suburbanization was made possible through the transformation of infrastructure in order to accommodate the car. Low-density development followed and freeways soon became the root of a new type of urbanism. Mobility became the primary concern and the environment became dominated by its provisions. The subject was transformed by the experience of motion. The visual sensorium became the primary mode of perception from the perspective of the automobile. The other senses were neutralized by the hermetic enclosure and attention was focused on the freeway. Designers became interested in how this experience would change the form of the built environment. This condition complexified the visual field into three distinct orders of movement: motion of the subject, apparent motion of the object, and actual motion of the object (Appleyard p. 176-180).

This fragmentation was dealt with by informing the driver of future events by clearing the field of obstructions or through the use of signage. The experience of motion both empowers and controls the actions of the subject. The office buildings were structured around the automobile and the mobility it provided. The scenography of the approach to these suburban offices is constructed to be experienced for the automobile. The landscape was molded to seamlessly connect the driver into the corporate enclave while projecting a monumental impression and strategic points of surveillance and control. Curvature is used to decelerate the driver and blur the boundary between infrastructure and the landscape. The corporations provided ample parking and expedient access into the building. In several cases, the building became hybridized with the parking structure in order to suppress its presence. Escalators were used to channel personnel from their cars into the building. This provided an intermediate zone of movement that further decelerated the movement of the body and gradually acclimated it for office environment. Once in the office, the landscape was framed by the large curtain walls that gave full visual connection to the exterior but dislocated it from the other senses. Once again the visual field is privileged and given freedom while the others are controlled by the work at hand.

Ford Administrative Center, 1948

Dearborn, Michigan
3,000 employees-1,500 cars
4'-8" construction module
20 acre site

The construction of this new center for the corporation was part of a larger regional planning initiative that determined the buildings connection to express-way traffic patterns. The movement of employees was organized around the goal to get them from their nearby residences to their desks as expediently as possible. This was achieved by building a parking structure that was central to the complex. From this point, personnel would disseminate into the building via escalators. It was an early experiment with a flexible office module with integrated mechanical systems. This system was enabled by the location of structural system of the perimeter of the building, outside the building envelop. This would maintain the purity of the modulated space and enable maximum flexibility. Each office unit had two window subdivisions that contained high velocity air conditioning units.

“The building maintained a vertical presence even with a surplus of space. There were aesthetic motivations behind this decision. Two well proportioned rectangular towers... will be seen by thousands of motorists from miles around. They will be the workshop for thousands living in the pleasant countryside nearby. It is reasonable to suppose that they will soon attract more developments, commercial and community buildings, and rural housing. If so, there will be a real chance for open, generous planning.

uninhibited by inflated real estate values, unrestricted by transportation difficulties. ...the company has made decentralization possible; and Henry Ford's dream is now being translated into its obvious city-planning consequences." (Arch. Forum, 1948)

Connecticut General Life Insurance Headquarters, 1957.
Bloomfield, Connecticut
2,000 employees (with room for 1,000 more)
6' construction module, 500,000 sf. office space

Frazier B. Wilde, the president of Connecticut General approached SOM to design economical and expandable offices for a new suburban center outside of Hartford. The company sought to relocate in order to set itself apart from the multitude of other insurance companies in the area. During the design process the company worked closely with Gordon Bunshaft of SOM and Francis Knoll in order to integrate the architecture and interiors of the project to suit the employee's needs. The structure of the company was subdivided into departments that had to have open communication amongst themselves. A committee devised work cluster patterns that translated into an office layout that was unhindered by interior columns and subdivided by moveable partitions. Insurance companies are literal information processors so a mechanical paper conveyor was developed that could deliver a document anywhere in the building within 16 minutes. The team based the modular system on the space required for one clerk and used that as the increment of spatial determination. It was slightly larger than the customary 5' module that was inadequate for the specific needs of the project. The team was innovative in placing all the work in one continuous space. This was a significant departure from the campus typology that Saarinen employed at General Motors Headquarters. This would not accommodate for the flow of information between departments and was not flexible enough for office hardware. Two smaller volumes that contained executive offices and a cafeteria were connected at the periphery.

The deep plan was relieved by four 72' square courtyards that provided framed landscape views to employees working in the interior spaces of the mass. It also afforded an easy walk from one department to another. These small landscapes were formal departures from the rigid geometry of the grid and introduced Isamu Noguchi and the as the artist/landscape designer in many of SOM's subsequent projects. His abstract objects and landscapes inscribed broad gestures of curvature through the modulated space of the office. A simulated landscape was coupled with a synthetic one. The movable partitioning system was afforded by a floor space that was unobstructed by columns. The girders spanned 60' and columns were suppressed within the thickness of the curtain wall. The interior walls were framed with 2" extruded aluminum identical to the exterior curtain wall hardware. These frames attached to the ceiling and were demountable and able to form multiple spatial configurations.

The frames held panels of sandblasted glass and laminated wood. The system provided enough flexibility for growth and change but didn't allow for ad hoc separation off of the controlling module. Office furniture and components also provided spatial separation. The modular was repeated on the ceiling and the floor through surface finishes and in the integration of HVAC, electrical, and communications wiring. The exterior curtain walls were of the highest quality available. They featured plate vision glass tinted green, spandrel glass with insulation behind, anodized aluminum extrusions, and neoprene gaskets. The landscape including the courtyards was highly integrated with the modularity of the rest of the building. One could walk outside of the building on a number of small landscapes and terraces and still be contained within the organization through the extensions of its geometry outward. Artificial bodies of water were used for the cooling system. The company provided ancillary amenities such as an auditorium and department store for the employees that were also included in the building.

Emhart Corporation Headquarters, 1963.
Bloomfield, Connecticut
400-500 employees-300 cars
42"×42" structural module, 6' office module, 100,000 sq. ft. office space
178 acre site

This project was built on a site adjacent to Connecticut General. The commission was attained through the success of the earlier project. It was one of the first to use a pre-cast concrete frame for the primary structure. The building contains all of the main office space on one floor that is held above a parking area on large concrete columns. The point of this was to suppress the presence of the automobile and to make the building a pure object set on a hill. The main office space cantilevers over the parking space and appears to float above the landscape creating a similar experience to driving an automobile. The concrete structure and large spans were necessitated by the need for unhindered movement of cars underneath the building. The massive concrete expression conveyed a monumentality that could be seen from a great distance. Inside this robust concrete frame was a finer system based upon a 6' module. It formed the basis for the office partitions. This approach of using two modules, one from the outside-in that managed the infrastructural connections and the other from the inside-out that was derived from the spatial requirements of the worker, is a clear example of how the body and the care were both influential entities in the system. The modular and material systems were determined by the spatial requirements in order to optimize their ability for movement.

American Can Company Headquarters, 1970.
Greenwich, Connecticut
36×52 structural module, 4' office module, 350,000 SF office space

1,500 employees – 1,000 cars
178 acre site

This latest building extended the innovations of Emhart and pushed them further. In this case the building's main structure actually is a massive parking garage that hides its contents underground. The entry ramps are large expressions of curvature that wrap the roadway into the building. The long span pre-cast concrete frame is determined by the parking requirements. Its rectilinear module extends up into the office floors where it is subdivided by square module of 4' that structure the mullions of the glass exterior wall and the office partitions. The choice of the 4' module is evidently a recognition of standard building materials. The customization of 5' and 6' modules presented problems for future repair.

In this case, the office space is truly a hermetic system held within a plinth that all but conceals its presence. It is only evident in the subtle expression of mullions held back from the concrete superstructure.

The building constructed its own landscape by creating a dam in a ravine the water that was retained was used for cooling equipment. The interior courtyard is another Noguci creation that evokes the serene formality of Japanese gardens. This building exemplifies a successful integration of automobile infrastructure, office environment, and exterior landscape into one complete organization.

COMPONENTS OF A SOCIETY OF CONTROL

These office buildings were innovations in a new kind of typology that emerged with the growth of corporations and suburbs. By moving out of the complex metropolitan areas, the corporation was able to establish a society based upon its own terms. By providing peripheral amenities for the employees, the company was able to sever the connections to their previous positions and totally occupy their existence with a lifestyle that was directed to sustain the organization. The projects were models for subsequent planning procedures that became standard practice. These buildings were instrumental in a larger trend that has drastically transformed the landscape of the country in a relatively short time. These techniques parallel the growth of the information and communication technologies.

They are inextricably linked and formally necessitate each other. It is clear that at some point in their material organization, they became subject to the transcendent flows of information and communication. Each one is different due to the way each client organized itself. They resolved different scales of complexity through formal reductions and geometric modulations. They initiated a system of variation within repetition that could accommodate for instances of change without breaking down the entire structure. These are clear diagrams of the perpetuating techniques of the corporations themselves. The trends they initiated continue with no apparent end in sight because of the power and momentum that these self-regulating machines have attained.

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