APRIL, 1968

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NORTH CAROLINA ARCHITECT

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"THE LAST REVISION"

The draftsman and the Architect
are men of skill and vision.
At least they are until they hear
That hated word: Revision!

The Architect with practiced eye
Surveys his grand design.
The draftsman then expertly draws
Each complicated line.

"Complete"! they sigh contentedly.
"Miraculous Precision"!
Oh, optimists! Tomorrow brings
Catastrophe . . . revision!

Revision one adds this new piece.
Revision two improves it.
Revision three makes it just right,
Then number four removes it.

You can't do this, you can't do that,
We'll wait for a decision.
But in the meantime, just revise
That last revised revision.

Revise . . . revise . . . the very word
Fills Architects with dread.
Though die they must, they'll be revised
To make damned sure they're dead.

We hope that God's no Architect
When He makes His decision.
If once they win their wings they hope
There'll be no last revision!

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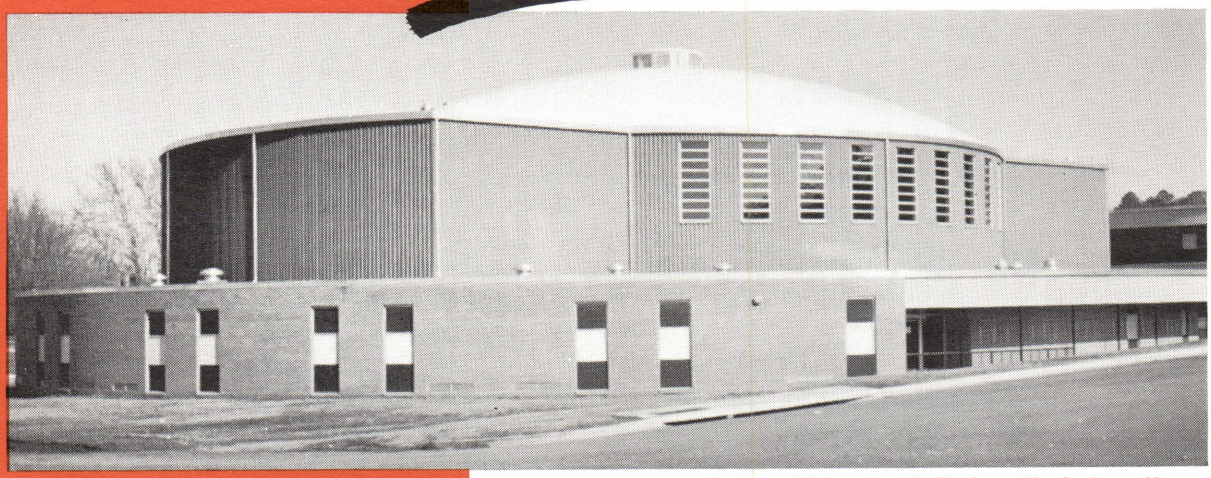

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Systems Generating Systems

BY CHRISTOPHER ALEXANDER

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1. There are two ideas hidden in the word system: The idea of a system as a whole and the idea of a generating system.

2. A system as a whole is not an object but a way of looking at an object. It focuses on some holistic property which can only be understood as a product of interaction among parts.

3. A generating system is not a view of a single thing. It is a kit of parts, with rules about the way these parts may be combined.

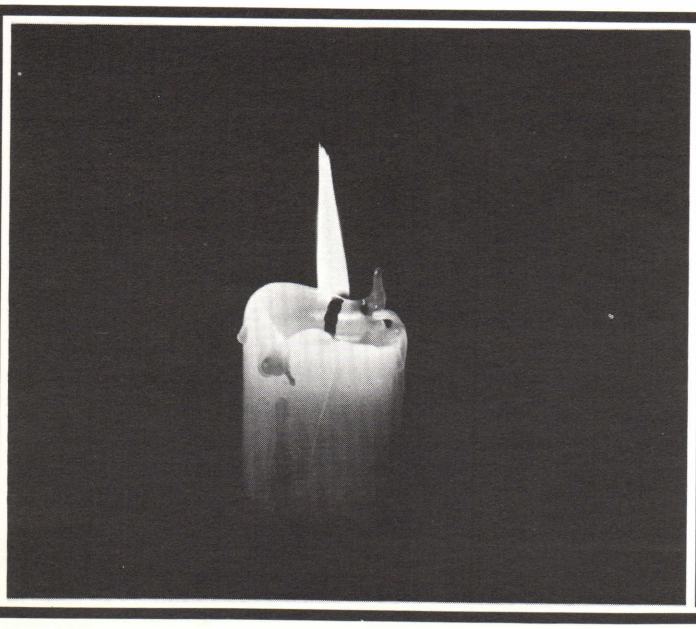
4. Almost every "system as a whole" is generated by a generating system. If we wish to make things which function as "wholes" we shall have to invent generating systems to create them.

1. *There are two ideas hidden in the word system: The idea of a system as a whole and the idea of a generating system.*

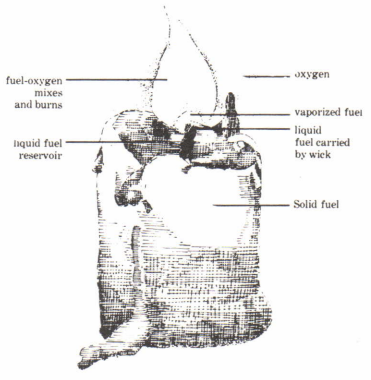
The word system, like any technical word borrowed from common use, has many meanings and is imprecise. This lack of precision in a technical word might seem dangerous at first; in fact it is often helpful. It allows news ideas to flourish while still vague, it allows connections between these ideas to be explored, and it allows the ideas to be extended, instead of having them cut short by premature definition and precision.

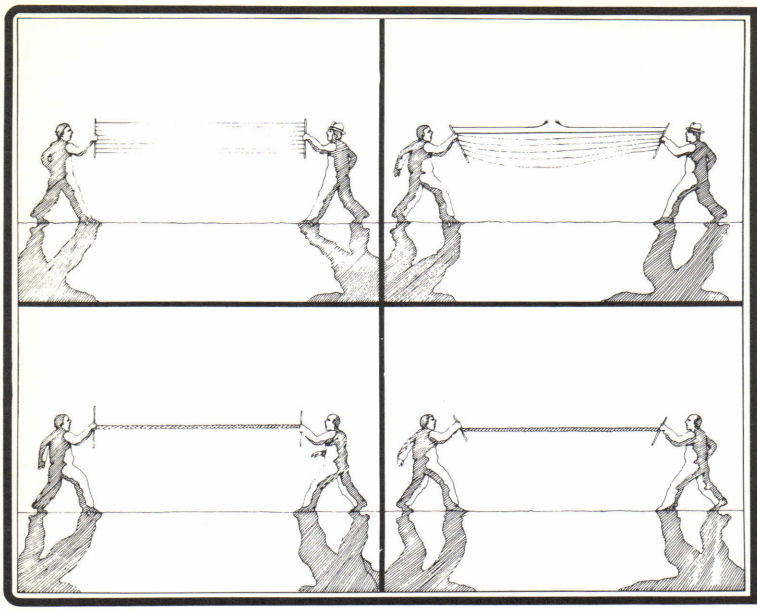
The word "system" is just such a word. It still has many meanings hidden in it. Among these meanings there are two central ones: the idea of *a system as a whole*, and the idea of *a generating system.*

These two views, though superficially similar, are logically quite different. In the first case the word "system" refers to a particular holistic view of a single thing. In the second case, the word "system" does not

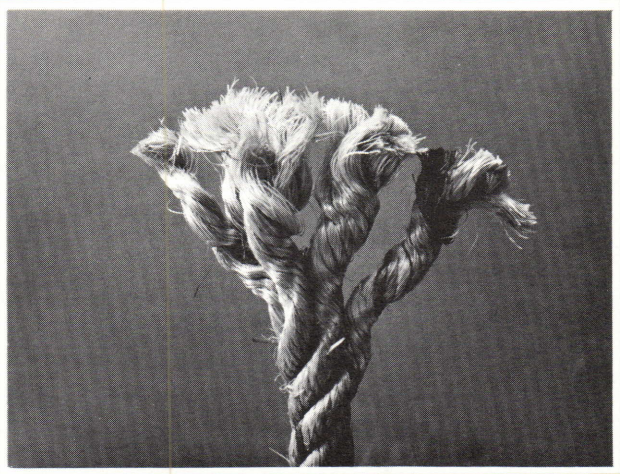


A candle flame maintains its steady size and shape because of the balance between the amounts of oxygen and fuel that are made available.





Twisting of the fibers makes them cooperate;
Twisted, they act as a system.



refer to a single thing at all, but to a kit of parts and combinatory rules capable of generating many things.

2. *A system as a whole is not an object but a way of looking at an object. It focuses on some holistic phenomenon which can only be understood as a product of interaction among parts.*

Let us consider some examples of holistic phenomena which need to be viewed as systems.

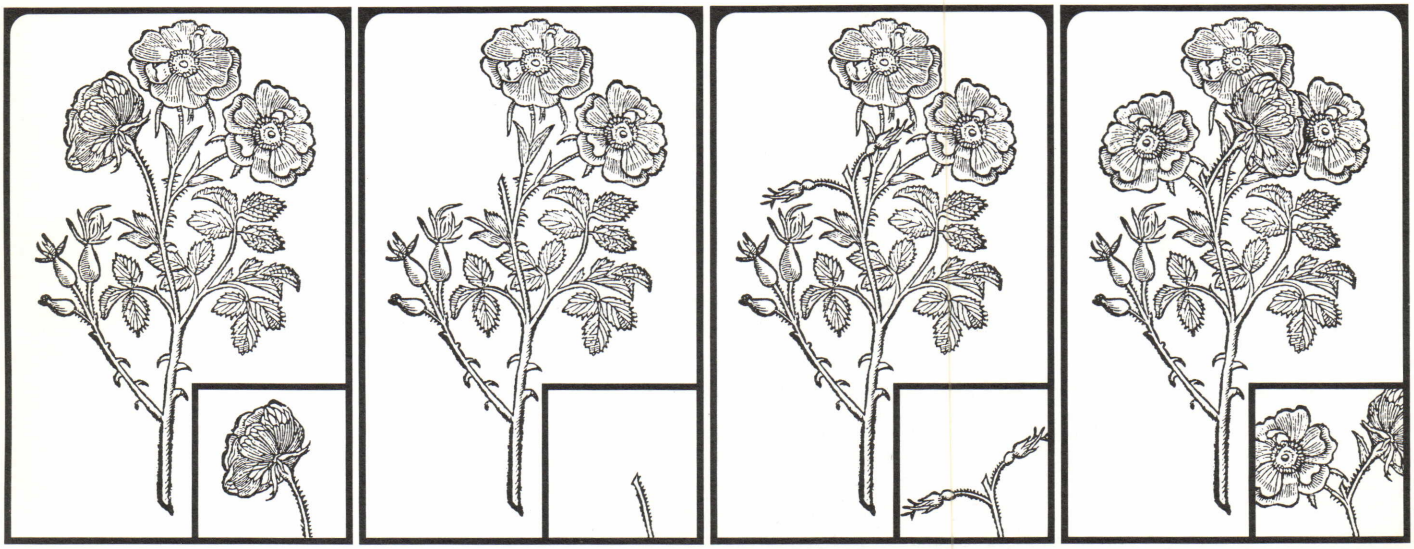
The great depression is an obvious example of a holistic phenomenon. We cannot understand the depression, except as a result of interaction among rates of consumption, capital investment and savings: the interactions can be specified in the form of equations: if we follow these equations through to their conclusion, we see that under certain conditions they must always lead to a depression.

The stability of a candle flame is another example of a holistic phenomenon. Why does it maintain approximately the same size and shape throughout its flickering? In this case, the "parts" are flows of vaporized wax, oxygen, and burnt gases—the processes of combustion and diffusion give the interaction between these flows—and these interactions show us at what size and shape the flame will be approximately stable.

The strength of a rope is another example of a holistic property. This strength is a result of interaction among the individual strands, caused by the twisting of the rope: untwisted, the rope's strength is governed by the weakest strand: twisted, the strands act together and increase their strength.

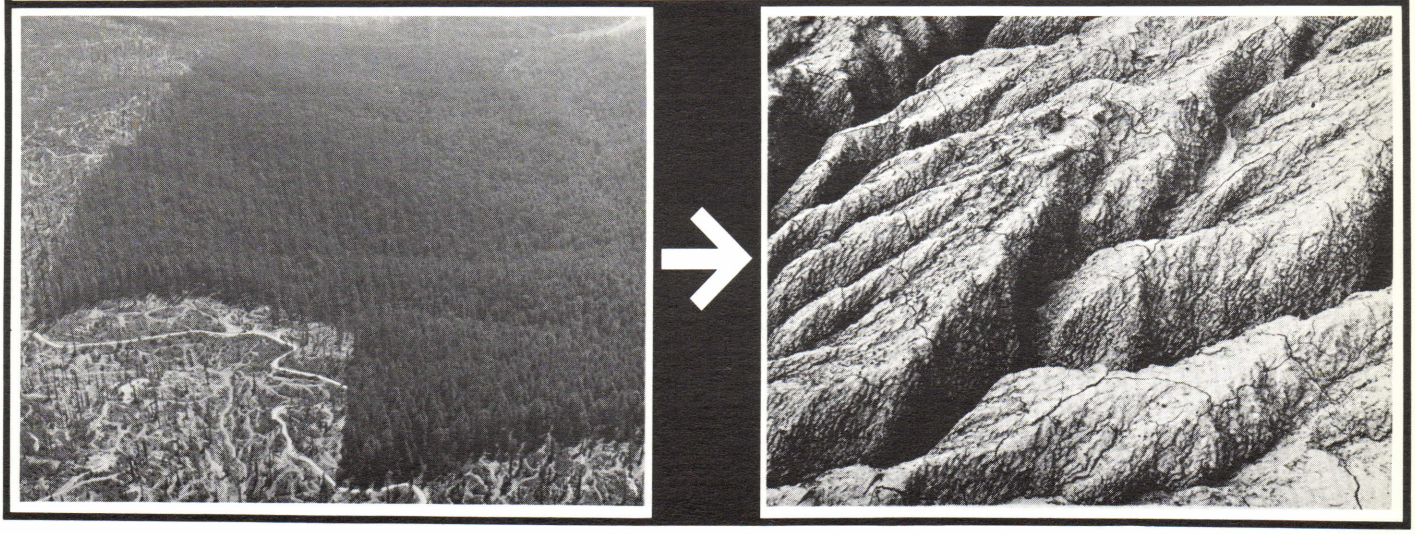
Another example of a holistic property, is the relation between input and output in any computer. In the toy computer called Thinkadot, a ball dropped into one of three holes, comes out on one of two sides. The output side is not determined by the input hole, but by the input hole and the internal state of the machine, which is itself determined by the sequence of past inputs. In order to understand this behaviour, we must understand the machine as a whole, considering the past inputs and the internal states, as parts,

Some self-regulating systems, when they lose components, grow new components to maintain their equilibrium.



(a self-regulating system is a self-regulating system is a self-regulating system)

Change one part of the system and the rest of the system changes with it.



and the way that different sequences of inputs and internal states create specific new internal states and outputs as interactions.

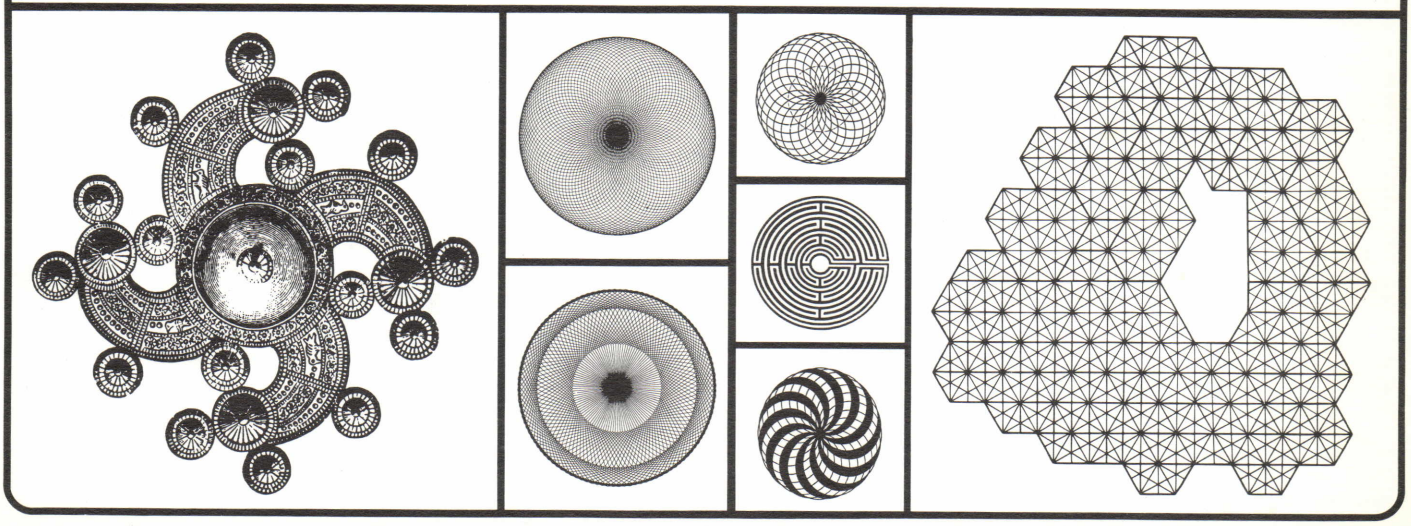
Another kind of holistic behaviour is that instability which occurs in objects that are very vulnerable to a change in one part: when one part changes, the other parts change also. We see this in the case of erosion: cutting down trees robs the soil of the roots which hold it together, so that wind and water can strip the soil of all remaining plants, and make a desert. We see it again in the death of the traditional farm: when the combine harvester replaced traditional harvesting, the entire balance of scale economies was destroyed, the little farms collapsed, and gave way to giant farms.

Let us summarize the content of these examples. In every case we are confronted with an object which displays some kind of behaviour which can only be understood as a product of interaction among parts within the object. We call this kind of behaviour, holistic behaviour.

The central point of the whole argument can be stated very simply. *The most important properties which anything can have are those properties that deal with its stability.* It is stability which gives a thing its essential character. The strength of an arch, the even burning of a flame, the growth of an animal, the balance of a forest ecology, the steady flow of a river, the economic security of a nation, the sanity of a human individual, the health of a society: these are all, in one way or another, concerned with stability.

Stability, no matter in which of its many forms, is a holistic property. It can only be understood as a product of interaction among parts. The essential character of anything whatever, since it must at heart be based on some kind of stability, must be understood

These devices are not systems. They have a "systematic" appearance because they are the products of processes which may be looked at as systems.

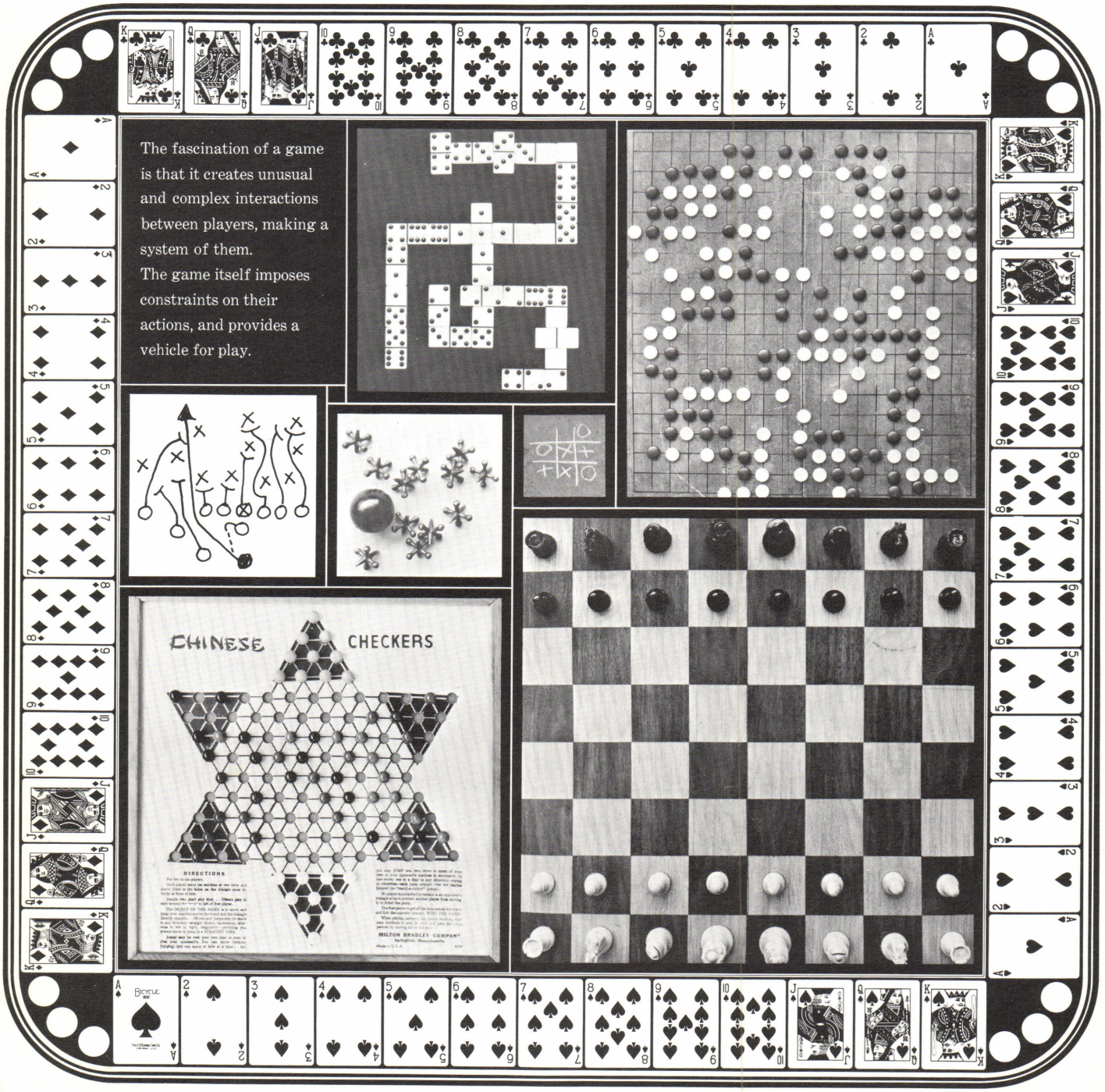


as a product of interactions within the whole. When we view a thing in such a way as to reveal its character in holistic terms, we speak of it as a system.

In order to speak of something as a system, we must be able to state clearly: 1. The holistic behaviour which we are focussing on. 2. The parts within the thing, and the interactions among these parts; which cause the holistic behaviour we have defined. 3. The way in which this interaction, among these parts, causes the holistic behaviour defined.

If we can do these three, it means we have an abstract working model of the holistic behaviour in the thing. In this case, we may properly call the thing a system. If we cannot do these three, we have no model, and it is meaningless to call the thing a system. The idea of a system is synonymous with the idea of an abstract model of some specific holistic behaviour. We may speak of the economic system in a country, because we can construct a system of equations which reproduce important holistic phenomena like depressions or inflation. If we couldn't do this, it would be meaningless to speak of economic systems.

We must not use the word system, then, to refer to an object. A system is an abstraction. It is not a special kind of thing, but a special way of looking at a thing. It is a way of focussing attention on some particular holistic behaviour in a thing, which can only be understood as a product of interaction among



the parts. Everything under the sun may be viewed as a system: a man smoking a cigarette may be viewed as a system; so may a leaf drifting in the wind; so may a brick; so may mankind on earth. But it only becomes a system if we abstract from it some special holistic property, which we cannot explain except in terms of interactions within the whole. Without a specific statement of what holistic behaviour we have in mind, what interactions among what parts cause this behaviour, and how they do so, calling a thing a system is no more than saying: "This is a pretty complicated thing, and I don't understand it very well."

The idea that a system is an abstraction, needs emphasis. Think of a flower as a system. If we want to understand the fact that the flower buds, and swells, and blooms—that we must certainly do by looking at the flower as a system. In this case it is the interaction among the parts, which creates the behaviour of the whole. But the same flower, has other properties which are not helped at all by thinking of the flower as a system: if it is used as a projectile, then its trajectory cannot be explained as a result of interactions among its parts: and if it is given as a gift, there is nothing that the flower does, no matter how complex the situation, that needs to be understood as a result of interactions among the flower's parts. The idea of a system is helpful only in understanding kinds of behaviour which result from interactions among parts.

Furthermore, even though we call a thing a system when we try to view it as a whole, this does not mean that we ever really view the thing in its entirety.

When we look at an airline from a systems point of view, we may focus on its scheduling—and we shall learn that because the airline only has a limited number of aircraft, the schedule of a flight from New York to Chicago turns out to be dependent on the schedule of another flight from Minneapolis to Salt Lake City. In this instance, we are looking at the airline "as a whole," because we are looking at the interactions among parts, but we are not concerned with the last button on the last mechanic's cap. The notion of "whole" refers only to the breadth of vision, not to the inclusion of detail: it is still abstract.

Most often common language obscures this very badly. When we speak of the solar system, or a hi-fi system, or an airline system, or of a plumbing system, the words are used in such a way as to suggest that the "system" is synonymous with the objects. But just occasionally the word is used correctly, even in common language. For instance, when we speak of the Ptolemaic system as opposed to the Copernican system, in each of these cases the word "system" is used correctly: it refers to an abstract way of looking at the interaction among earth, planets, sun and stars—not to the objects themselves.

The discipline of abstraction has one drawback. Occasionally we are confronted with phenomena which are clearly the products of interactions—but the interactions are so complex that we cannot see them clearly, and we cannot make the effort of abstraction successfully. Take for instance, the baffling complexity of a seagull landing, or of an ecstatic, screaming, laughing girl. In these cases a too rigid insistence on the idea that a system is an abstract model, might easily lead us to abstract out some facile inessential system—at the cost of the wonder which is really there.

This is exactly what happens when a systems analyst looks at a building—manages to describe the circulation, the acoustics, the heating and the load bearing structure as systems—and fails to identify the most interesting human and social systems, because he can't describe them in explicit terms.

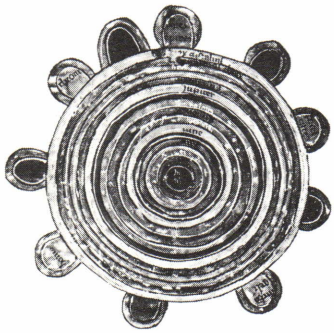
Thus there is a second lesson to be learned. The first lesson said: Don't call a thing a system unless you can identify the abstract system you are talking about. The second lesson says: learn the first lesson, but don't let it railroad you into making facile abstractions.

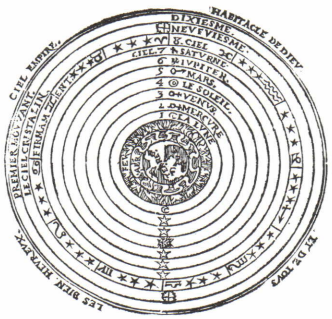
When we are confronted with a complex thing, we often begin with nothing more than a feeling or a "sense" that it functions as a system. Driven by this feeling, we then try, painstakingly, to abstract out just that holistic behaviour which seems essential, and those interactions which cause the behaviour. This is an active process. It begins with feeling, and sensing, and only turns to thinking later. Start with some aspect of life so interwoven that you feel in your bones it must be a system, only you can't state it yet—and *then*, once you can feel it clearly, then try to pin the system down, by defining the holistic behaviour you are discussing, and which interactions among which parts create it. But feel it clearly first, before you try to think it.

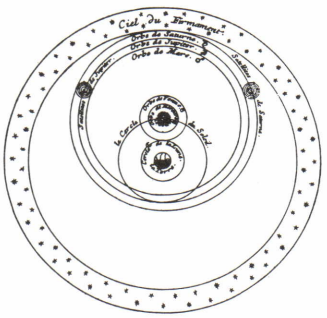
The systems point of view is not neutral. It will change your whole view of the world. It will lead you to realize that the most important characteristics of human individuals are products of their interactions with other people. It will lead you to realize that the life of nations—though these nations may seem self-sufficient—is produced by interactions in the whole world, and that they only get their strength from their position in this larger whole. It will lead you to see that the health of cities, is produced by interactions among interdependent parts, including houses, cafes, and theaters, yes, but also equally including slums and graveyards.

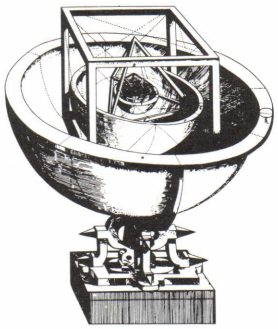
The system viewpoint is a modern, disciplined, version of the sense of wonder. It is that view of things which man takes when he becomes aware of oneness and wholeness in the world.

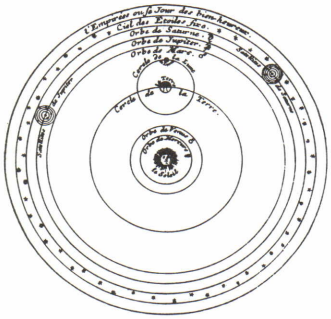
The ways in which man has viewed the solar system have resulted in many ideas about its structure. A single set of objects may be thought of as a system in a number of different ways.

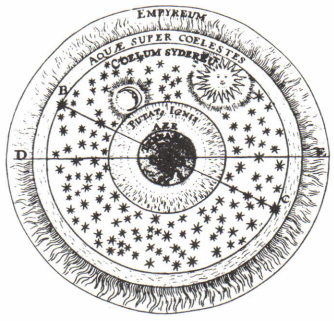


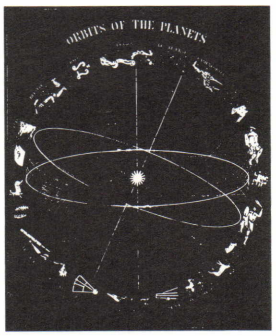


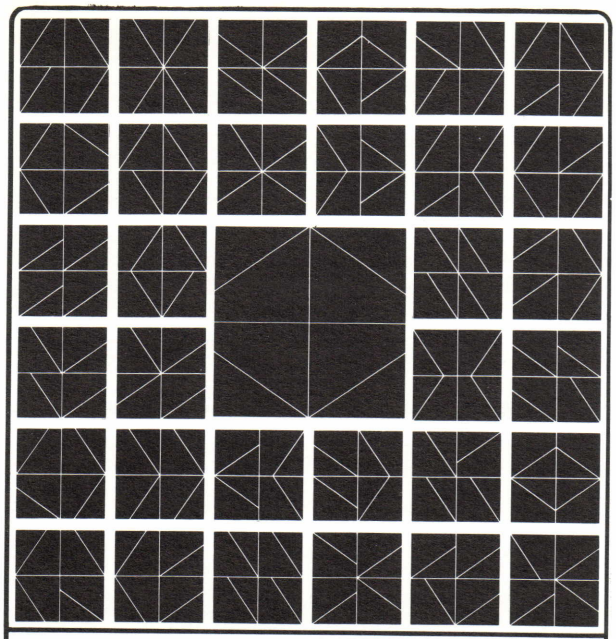


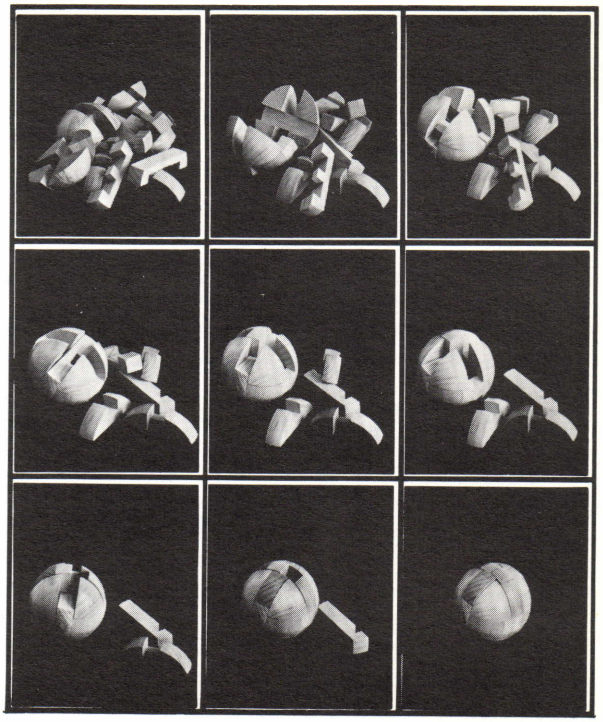












Two Kits of Parts. (above) The rules of combination allow many arrangements of parts. (below) The rules of combination allow only one arrangement of parts.

3. *A generating system is not a view of a single thing. It is a kit of parts, with rules about the way these parts may be combined.*

This is a different use of the word system from the first one. In colloquial English we often use the word system to mean "a way to do something": that's what a betting system is; that's what the Montessori system is; that's what the democratic system is.

Each of these systems is, at heart, a system of rules. A betting system tells you how to place your bets, the Montessori system lays down rules to be followed by children and teachers in nursery school, the democratic system of government lays down certain rules about the nature of representation, the choice of representatives, and the conduct of elections. In all these cases, the rules are designed to generate things. A betting system supposedly generates winning bets, an educational system generates well educated pupils, the democratic system supposedly generates freedom and good government.

We may generalize the notion of a generative system. Such a system will usually consist of a kit of parts (or elements) together with rules for combining them to form allowable "things." The formal systems of mathematics are systems in this sense. The parts are numbers, variables, and signs like + and =. The rules specify ways of combining these parts to form expressions, ways of forming expressions from other expressions, ways of forming true sentences from expressions, and ways of forming true sentences from other true sentences. The combinations of parts, generated by such a system, are the true sentences, hence theorems, of mathematics. Any combination of parts which is not formed according to the rules is either meaningless or false.

A generating system, in this sense, may have a very simple kit of parts, and very simple rules. Thus the system of triangles which may be put together to form a square, is a generating system. Its rules generate all the ways of putting these triangles together to form a square. It is typical of a system that the rules rule out many combinations of the parts. Thus these triangles could be put together in an infinite variety of ways—but most of these ways are ruled out, because the outside perimeter is not a square, and this thing is not connected.

Another example of a generating system, is the system of language. Here we have rules at several different levels. At one level, the letters are the parts, and there are rules which govern the way that letters may be put together to form words. In English there could be no word beginning with Rx. The rules of phonology prohibit it. At another level, the words are themselves parts, and there are rules which govern the kinds of sentences which may be made from words.

Perhaps the most interesting and important generating system in the world, is the genetic system. Every animal in the animal kingdom is generated by a set of chromosomes specific to that animal. Each chromosome in turn is generated by four bases (like a necklace which uses only four kinds of bead). The four bases form a kit of parts which generates the chromosome. These chromosomes themselves provide the rules for building amino acids (another kit of parts), proteins from amino acids (another kit of parts), cells from proteins (another kit of parts) and then builds the animal from cells. The kit of parts

formed by the four bases, and their rules of combination, indirectly generates every animal there is.

A building system is a generating system in this sense. It provides a kit of parts—columns, beams, panels, windows, doors—which must be put together according to certain rules.

4. *Almost every "system as a whole" is generated by a generating system. If we wish to make things which function as "wholes" we shall have to invent generating systems to create them.*

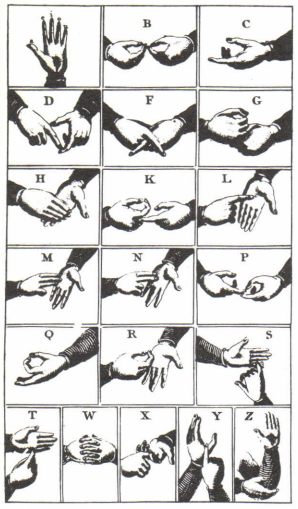
There is a relationship between the two ideas of system which have been defined. Almost every object with behaviour that depends on some "system as a whole" within the object, is itself created by a generating system.

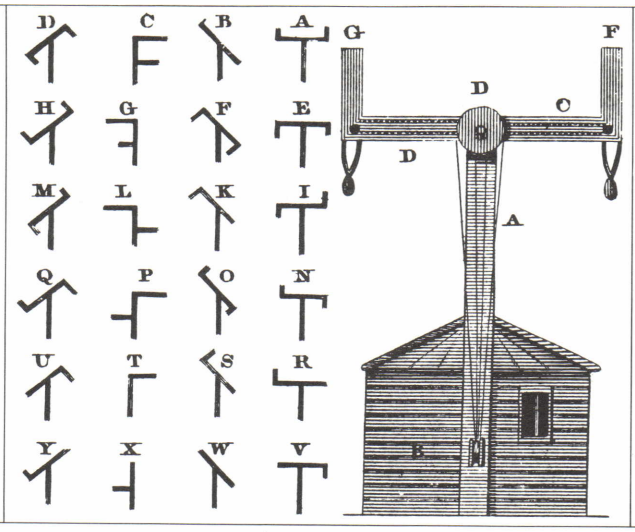
Take an obvious and simple case: a hi-fi system. Its purity of performance can only be understood as a product of the combined effect of all the various components, working as a whole. The same hi-fi system is also generated by a generating system: the kit of all the parts on the market, and the rules governing the electrical connections and impedance matching between these parts.

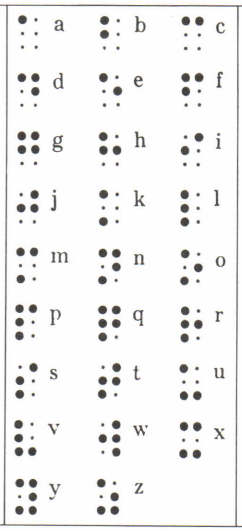
To take a more complicated case: the railroad switchyard. It plainly functions as a whole. In order to understand it as a device for breaking up and making trains, we must focus on the sequence of switches, and on the fact that the length of track in front of the switches depends on the length of track behind

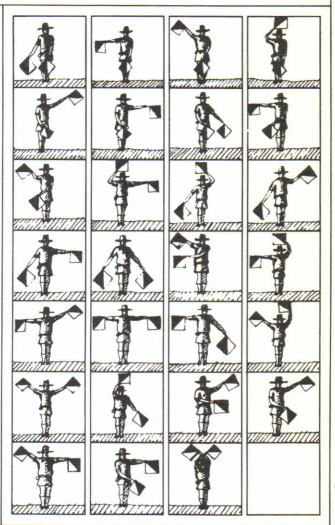
Every animal is generated by a set of chromosomes specific to that animal. Each chromosome is a linear arrangement of four bases (like a necklace which only uses four kinds of bead). The four bases are the same in every animal. The kits of parts formed by these four bases and their rules of combination indirectly generate every animal in existence.

THESE ARE KITS OF PARTS









(WHICH MAKE⇩)

THIS KIT OF PARTS

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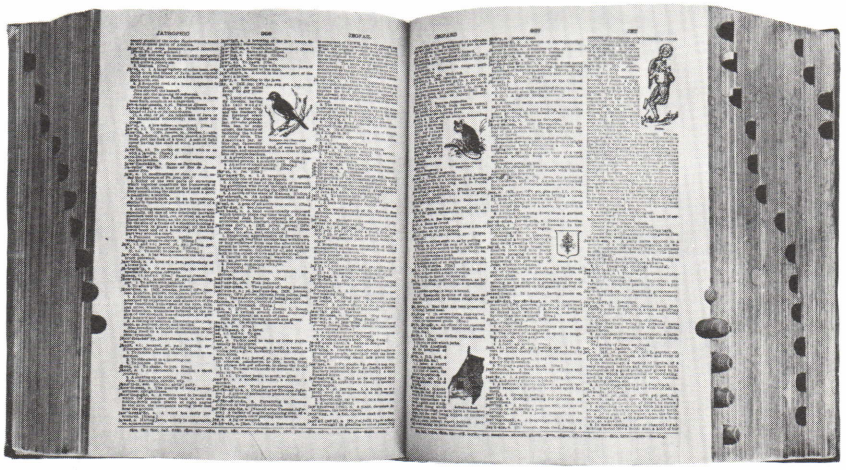
(WHICH MAKES⇩)

THIS KIT OF PARTS



(WHICH MAKES SENTENCES)

the switches and on the length of trains. At the same time, the switchyard is also plainly generated by a generating system. The pieces of track, switches, couplings, cars, together with the rules for putting them together, form a kit of parts which generates properly functioning switchyards.

The most complicated case of all, and the clearest, is that of an animal. A landing seagull certainly needs to be seen as a system: so does almost everything else that seagulls do. At the same time, this seagull is created by a generating system: the genetic system. An animal is *both* something which needs to be seen holistically, and generated by a generating system.

The relationship between holistic systems and generating systems is easy to understand. If an object has some holistic property caused by interaction among parts—then it is clear that these particular parts and these particular interactions, will only come into being if the parts have very constrained relationships to one another. The object then, must be generated by some process which assembles parts according to certain constraints, chosen to ensure the proper interaction of these parts, when the system operates. This is exactly what a generating system is.

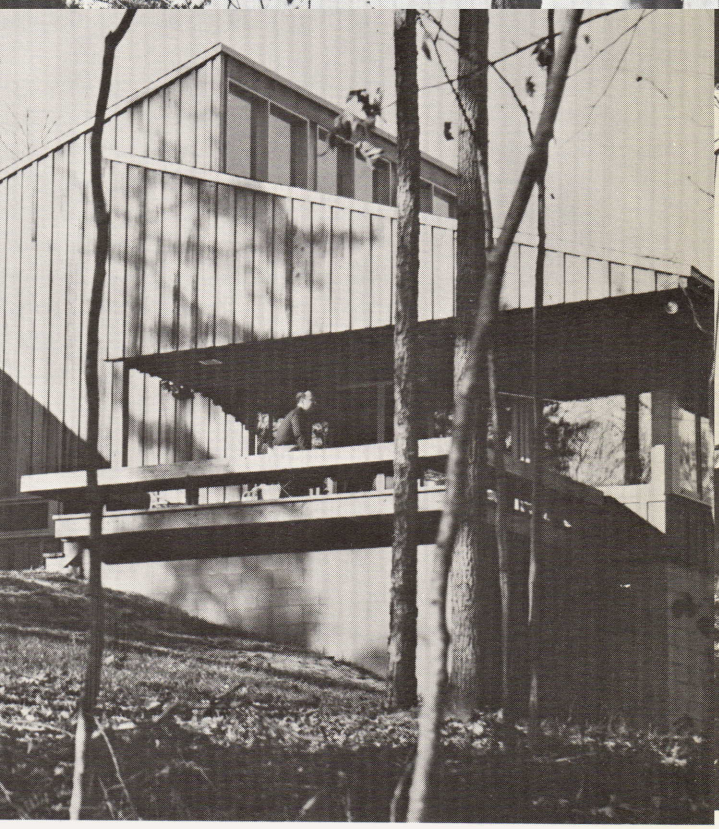
The generating system need not be conscious (as in the case of the switchyard), nor even always explicit (as in the genetic case). Sometimes the processes which make up the generating system are integral with the object being formed—thus the candle flame is generated by chemical processes which are the same as those processes which then maintain the system's equilibrium and make up the interacting parts, when we view the flame as a holistic system.

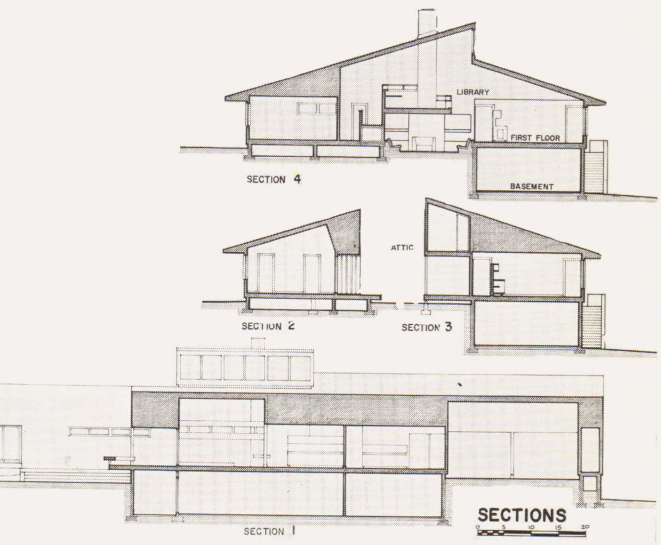
It is true then, that almost every "system as a whole" is generated by a generating system. This axiom contains a remarkable lesson for designers. Man as a designer is concerned with the design and construction of objects which function as wholes. Most of the important properties a city needs to support life, for instance, are holistic properties.

Our axiom means this: To ensure the holistic system properties of buildings and cities, we must invent generating systems, whose parts and rules will create the necessary holistic system properties of their own accord.

This is a radical step in the conception of design. Most designers today think of themselves as the designers of objects. If we follow the argument presented here, we reach a very different conclusion. To make objects with complex holistic properties, it is necessary to invent generating system which will generate objects with the required holistic properties. The designer becomes a designer of generating systems—each capable of generating many objects—rather than a designer of individual objects.

A final word of caution. As we have already seen, a building system is an example of a generating system. It is a kit of parts with rules of combination. But not every generating system necessarily creates objects with valuable holistic properties. The generating system which makes squares out of triangles is an example. It is a perfectly good generating system; yet the objects it produces do nothing: they have no holistic system properties whatever. In the same sense, those building systems which have so far been conceived, make buildings, but they do not make buildings with any really important holistic system properties. In a properly functioning building, the building and the people in it, together form a whole: a social, human whole. The building systems which have so far been created do not in this sense generate wholes at all. While it is inherent in the generating system of an animal that the finished animal will work as a whole, it is *not* inherent in any of today's building systems that the buildings they produce will work as social or human wholes. Creating building systems in the present sense is not enough. We need a new, more subtle kind of building system, which doesn't merely generate buildings, but generates buildings guaranteed to function as holistic systems in the social, human sense.

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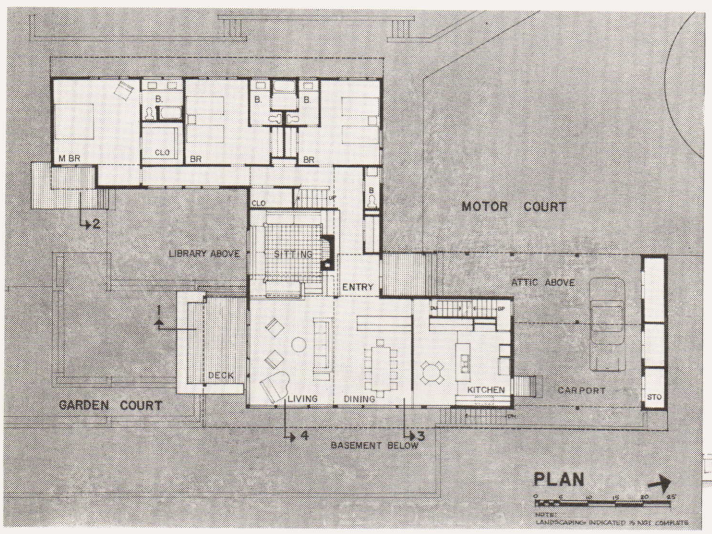
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MOTOR COURT
LIBRARY ABOVE
SITTING
ENTRY
ATTIC ABOVE
DECK
LIVING
DINING
KITCHEN
CARPORT
STO
GARDEN COURT
BASEMENT BELOW
PLAN

PURRINGTON RESIDENCE

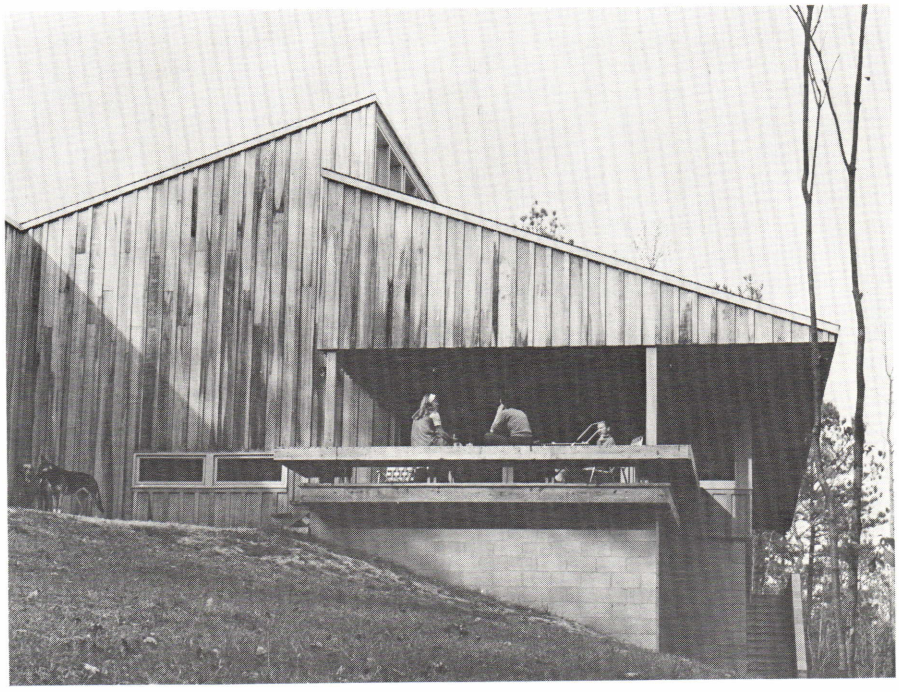
Raleigh, North Carolina

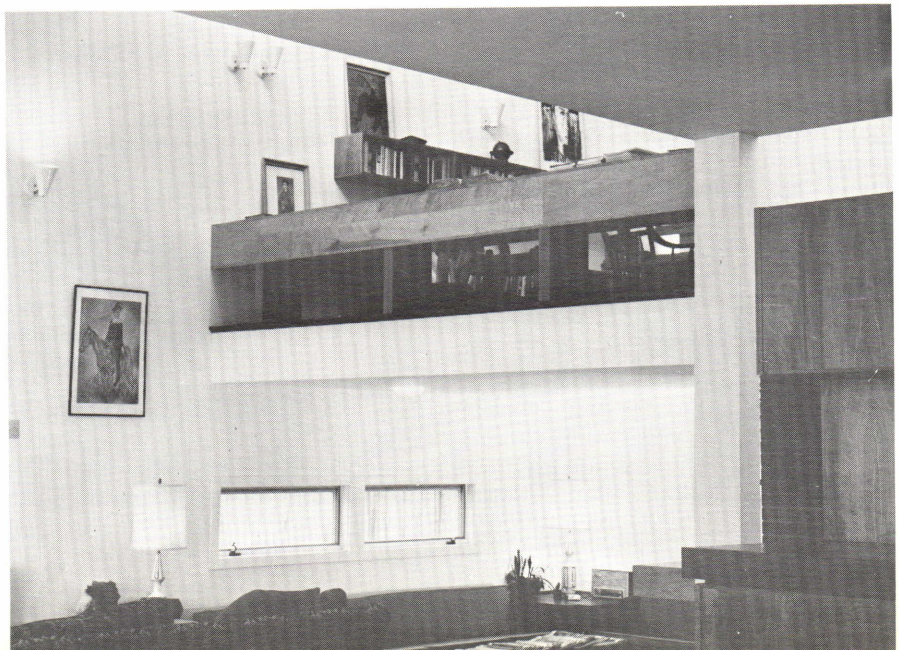
Owner:
A. L. Purrington, III
Raleigh, North Carolina

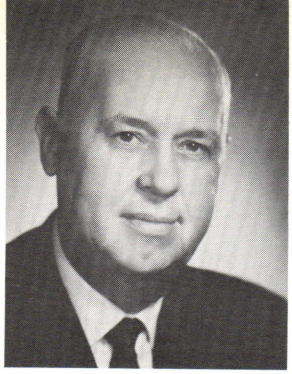
Architect:
Edwin F. Harris, Jr.
Raleigh, North Carolina

General Contractor:
Davidson and Jones
Raleigh, North Carolina

Photographer:
Donald Whitesell
Raleigh, North Carolina







PROFIT PLANNING FOR THE ARCHITECT

Sponsored by the North Carolina Architectural Foundation and the North Carolina Chapter of The American Institute of Architects, Dr. Charles Marsh and Mr. Alf Werolin of Case and Company, Inc., San Francisco management consultant firm, conducted a seminar on "Profit Planning for the Architect". The one day affair was held at the Raleigh YMCA on Friday, April 19th, and approximately 100 architects attended.

The seminar was designed to help architects in private practice cope with the ever-increasing "profit squeeze" in which they find themselves. The recent Comprehensive Cost Study conducted by Case and Company for The AIA revealed that in 1966 one of twelve architectural firms lost money, and one of four projects was completed at a loss.

Based on their experience with the Cost Study, with the National AIA, with State Societies and Chapters and with individual architectural firms, Dr. Marsh and Mr. Werolin have developed a concept and methodology of accomplishing profit objectives in the practice of architecture.

Topics discussed at the seminar included:

The challenge faced by today's private architect.

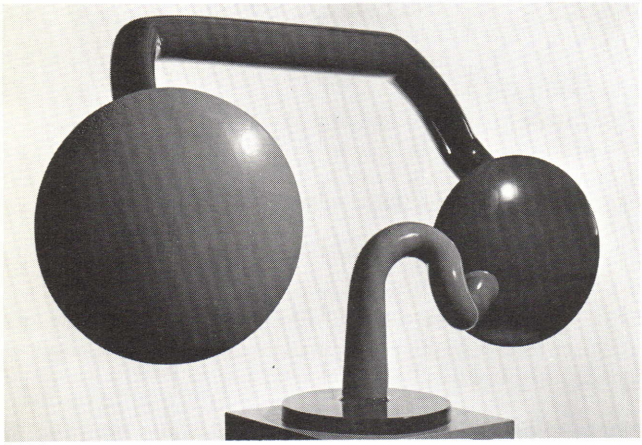
The architect's need for actively planning a profitable practice.

The nature and behavior of costs.

The mechanics and interrelationships of planning and controlling costs and profits.

An illustrative example demonstrating the practicability of applying profit planning in the management of an architectural office.

In 1966 and 1967 a comprehensive study of the costs of architectural services was conducted for the AIA by Case and Company under the direction of Dr. Marsh and Mr. Werolin. Data and information was collected from 223 firms in 47 states, and included 1,150 projects. A full report of this study has been published by The American Institute of Architects, titled "The Economics of Architectural Practice", and may be purchased from The Institute.



"Landscape XXIII"—Robert Howard, Chapel Hill

SCULPTURE SHOW

Architects are invited to preview a show: "Southeastern Sculpture Today—Inside and Out" at the Gallery of Contemporary Art in Winston-Salem, N. C. The preview will be on April 21, from 3-5 P.M. at 500 South Main Street.

Exhibiting will be 25 of the top sculptors from North Carolina, South Carolina, Tennessee, Virginia and Georgia. All works will be for sale. The show will run April 21 through May 25.

CCPDCA ELECTS OFFICERS

Sam Hayworth of Rocky Mount, N. C. was elected President of the two-state CAROLINAS COUNCIL, of the Painting and Decorating Contractors of America at the Annual Meeting held in Durham, N. C. during February. Elected to serve as Vice-Presidents are: B. J. Herring, Winston-Salem and Lonnie C. Ferguson, Charleston, S. C. Ned H. May of Durham was re-elected Secretary-Treasurer. At the annual banquet, B. J. Herring, Winston-Salem, received the "Man of the Year" Award for his outstanding leadership and service to his local Piedmont Chapter and to the Council. A. B. Whitley, Jr. of Greenville was presented the Past President's plaque by Ned H. May, Chairman of the Awards Committee.

IN MEMORIAM

William Lewis Crouse, 40, an architect, died January 12 at Haven Nursing Home in Lexington after a long illness. A native of Winston-Salem, he was a graduate of N. C. State University, School of Design, in 1955. Survivors include his wife and three daughters; his mother, seven sisters and three brothers.

(l. to r.) Patrick, Ross, Setzer & Thames

SOLITE DESIGN PRIZES GO TO 4 NCSU STUDENTS

Four students at N. C. State University were judged to be equal winners of the design Prizes in Architecture for 1967, offered annually by the Carolina Solite Corp., Charlotte, N. C.

Winners are Paul K. Thames, Raleigh; William J. Patrick, Shawboro; James H. Ross, Ayden and Stephan L. Setzer, High Point. Winners were announced by Henry L. Kamphoefner, Dean of the university's School of Design. Each of the men will share in the $500 prize given annually by the sponsoring Solite Corp.

AISC ANNOUNCES 1968 ARCHITECTURAL AWARDS PROGRAM

The American Institute of Steel Construction has announced the opening of its 1968 Architectural Awards of Excellence Program. The competition is to encourage the creative use of structural steel. It is open to all registered architects practicing professionally in the United States. Entries should be completed after January 1, 1967 and prior to June 1, 1968. Entries must be submitted prior to June 1, 1968. Details of the program and entry information can be obtained from AISC, 101 Park Avenue, New York, N. Y. 10017.

INCIDENTALLY . . .

Allred & Mercer, Architects of Thomasville, N. C. formed a new architectural firm . . . Arthur R. Cogswell, AIA and Werner Hausler, AIA, announce the formation of a partnership — Cogswell/Hausler Associates, Architects, University Square, Chapel Hill, N. C. . . . John S. MacRae III, formerly with Woodroof and MacRae, Architects, has opened his own office for the practice of architecture at 1803 Pembroke Road, Greensboro, N. C.

NCAP NAMES NEW OFFICERS

W. J. Smith, R. Ph., and Executive Director of the North Carolina Pharmaceutical Assoc., Chapel Hill, was elected President of the North Carolina Association of Professions at its annual meeting held in Durham on March 20th.

Elected to serve with Mr. Smith were: George F. Kirkland, DDS, Durham, First Vice-President; Robert L. Clemmer, FAIA, Hickory, as Second Vice-President; Edward G. Batte, DVM, of Raleigh, as Secretary; and George G. Gilbert, MD, of Asheville, as Treasurer; Mrs. Annette S. Boutwell serves as Executive Secretary for the member Association. Robert G. Carson, P.E., of Raleigh was elected a member of the Executive Committee and Robert G. Bourne, P.E., out-going President, will serve as ex-officio member of the Executive Committee.

New and re-appointed members of the thirty-six member Board of Directors were announced by the Secretary at the meeting of the Board of Directors.

Past-Presidents were recognized at the Luncheon Session and presented wall plaques and diamond emblem pins by President-Elect W. J. Smith. Honored were: Thomas C. Cooke, P.E. of Durham; John R. Kernodle, MD of Burlington; Earl L. Knox, DVM of Raleigh; William W. Dodge III, AIA of Raleigh and Robert G. Bourne, P.E. of Raleigh.

L. to R.: G. E. Freeman, J. S. Bensen, W. F. Freeman & C. E. Powell

N. C. DESIGN FIRM OPENS CARIBBEAN OFFICE

Wm. F. Freeman, President of Wm. F. Freeman Associates, an architectural, engineering, planning and surveying firm, located in High Point announced the opening of a new office in St. Thomas, U. S. Virgin Islands, to handle the firm's environmental design practice in the Virgin Islands as well as the entire Caribbean area.

The new office is known as Freeman Associates Caribbean and is located at International Plaza on the waterfront of St. Thomas' internationally famous harbor. It is affiliated with Antilles Land Development, Inc., the largest real estate and land development firm in the Virgin Islands.

When asked why St. Thomas was chosen as the base of operations, Mr. Freeman pointed out its central location within the chain of Caribbean Islands whose economic development throughout the entire Caribbean area is accelerating and resulting in need for professional environmental design services to guide this development. Plus the fact that the Virgin Islands are U. S. possessions and offer a favorable business environment similar to that on the U. S. mainland. "This was a major consideration in determining the precise location of the new office."

New design projects are already underway on St. Thomas, including several residential land development projects and a new apartment complex. Several other major projects are being studied. Also because Wm. F. Freeman Assoc. has extensive design experience with government and military projects, it was felt that the new office could provide a valuable professional service to U. S. Military and space activities which continue to ex-

pand throughout the Caribbean as a result of the area's strategic location to the U. S. mainland.

Mr. C. Edmond Powell, a Professional Engineer and head of the Construction Department will be in charge of coordinating activities of the new office. Additional specialists will be assigned there as required to manage all new projects.

CALENDAR

April 19: Profit Planning Seminar for Architects, YMCA, Hillsborough Street, Raleigh.

April 22-23: National AIA Board of Directors Meeting, Grove Park Inn, Asheville.

May 2: Raleigh Council of Architects, YMCA, Hillsborough Street, 12:15 P.M., George M. Smart, AIA, President.

May 7: Durham Council of Architects, Jack Tar Hotel, 12:30 P.M., Wm. B. Keener, AIA, President.

May 8: Charlotte Section, N. C. Chapter, AIA, Charlottetown Mall Community Hall, 12:30 P.M., Roy F. Kendrick, AIA, President.

May 16: Greensboro Registered Architects, Cellar Antoine's, 12:30 P.M., R. E. L. Peterson, AIA, President.

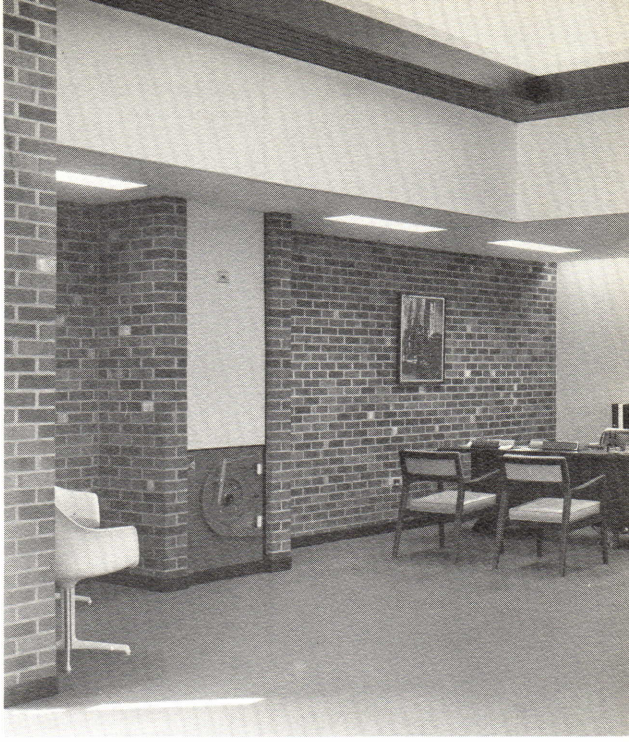
May 21: Winston-Salem Council of Architects, 12:-15 P.M., Twin-City Club, L. Ray Troxell, AIA, President.

June 23-29: National AIA Meeting, Portland, Oregon and Honolulu, Hawaii.

Aug. 1, 2 & 3: N. C. Chapter AIA Summer Meeting, Grove Park Inn, Asheville.

Oct. 9-13: South Atlantic Regional AIA Convention, Atlanta, Georgia.

INDEX TO ADVERTISERS



North Carolina National Bank
Coliseum Branch
Winston-Salem, N. C.

Architect:
Fred W. Butner, Jr. Associates

Structural Engineer:
Sutton & Kennerly

General Contractor:
Massey Construction Co.

Ageless Architecture through Brick Beauty