

NAS: Sure. It's a question of encapsulating harmful products within attractive ideas. It was not realized at the time but this is the way viruses work. Viruses have a destructive piece of DNA that is encapsulated in a very attractive protein. It enters the cell, and then when it enters the cell it uses the cell's reproductive mechanism to reproduce itself. Then it kills the organism.

***MB:** When I blab about my annoyance with the art and architecture scene, many of my arts friends will claim that the real problem is Americans, developers. Look what they're up against: Americans have no taste.*

NAS: Well, that raises the question of urbanism. It is the same warped thinking of Le Corbusier, which will destroy our cities as well as our buildings ... Because the automobile city has spawned this very unpleasant typology of suburbia. That is also encapsulated as part of the post-war reconstruction. In the densely built inner cities you destroy the actual downtown and put a giant skyscraper there, and everyone moves to the suburbs where we build a new type of city where everyone has a private villa on vast acres of manicured lawn. Everyone pretends to be French or English aristocrats. The problem of course is that it doesn't work. You have a crummy little suburban house on a quarter acre, if you're lucky, with a scraggly little lawn no one ever uses. No one ever uses the lawn; it's too small and unprotected even for kids to play in.

***MB:** You trace it back to Le Corbusier?*

NS: He did not define suburbia, but he threw out these totally unrealistic ideas about wealthy people each having a villa that you can drive into. If you remember the original Corbusian villas, you drove into them and were surrounded by acres of green. It's completely impractical. You can have that only if you're extremely wealthy. And few people are wealthy enough to maintain that.

***MB:** Jane Jacobs once said that many people don't realize how much people like Le Corbusier simply didn't like cities — in fact wished cities ill.*

NAS: Le Corbusier had serious psychological problems. He had agoraphobia. I have not read medical reports on him. But he despised people. And crowds. And felt ill at ease with many people around. He had a monomaniacal goal in his life, to eliminate the street with people and the urban life that occurs on the European street. It's the same sort of intense fanaticism that other people have had for other destructive ends, like some dictators. They absolutely hate something and they devote their intelligence and energy to eliminating that thing. Le Corbusier wanted to eliminate the people and the streets. And he has almost succeeded. He was intelligent enough to come up with all sorts of reasons why they should be eliminated. But people bought the reasons.

***MB:** Modernism, like Marxism, seems to have a hypnotic power. First it sucks people into its web. And then people find it very difficult to leave.*

NAS: It's the encapsulation, and also the phenomenon of lock-out. "Lock-out" is a primary technique used by cults. It describes the first step of establishing a cult. It takes a recruit and identifies what he or she dislikes. And then the opposite of what the cult promotes is associated with what the person dislikes.

***MB:** There's a lot of projection going on.*

NAS: It's the first step in indoctrination. They take the potential recruit and they make small talk with this person to determine that the person is against — say, government oppression. So then they say, "Well, classical buildings represent oppression." And when the potential recruit buys that, then that's lock-out.

MB: *You turn what's disliked into the OTHER, the enemy.*

NAS: You manufacture the enemy, and you identify the enemy with the opposite of what you're trying to promote.

MB: *Would you really compare an education in modernist architecture to a cult indoctrination?*

NAS: Yes. The groundwork was laid out brilliantly by both Frank Lloyd Wright and by Walter Gropius. They studied cult techniques in order to use them to promote their sort of architectural education. The Bauhaus was a hotbed of cultish affinity. There were several distinct cults there — really weird cults, which is the reason the government finally closed them down.

MB: *Do you have any quarrels with Tom Wolfe's famous "From Bauhaus to Our House"?*

NAS: No. It's a lovely book, a brilliant book. Incidentally, at the time I met Christopher Alexander he had not yet read Wolfe's book. I gave him a copy, and he enjoyed it immensely.

In fact, what has led me into a rather distasteful study of cults is things like the Tom Wolfe book. He was there in New York, he saw what was going on, and he wrote a very nice book about it. Many people read it — and it made no difference. So I asked myself, "How can this be? This man said it, decades ago. People read it and they didn't wake up." They kept doing this stuff.

No, there are fundamental reasons why people continue with this. It is like in the old Soviet Union. People are terrified to change. They may laugh, they may throw it off, but people are just deathly afraid to change. There's something working on them on a deep subconscious level here. And that's how I went into the indoctrination angle.

MB: *Years ago, when I was wrestling with what I was encountering in the arts, and first running into ideas like Christopher Alexander's and yours, I'd tell people what I'd found out. I'd be relieved, happy and excited. And they'd look at me like I was crazy.*

NAS: The problem is far deeper than I suspected. Even Christopher has said that. He said that he naively thought when they read "A Pattern Language" people would say, "Aha, this is it. It's obvious. And let's start doing a human architecture." But it is only lay people who read "A Pattern Language" and say, "Aha, this is obvious". Architects? Well, with them the conditioning is far stronger than Christopher imagined. He was extremely disappointed. He did not understand the resistance that "A Pattern Language" met, and that it still meets these days.

MB: *I've met some of the new classical and new traditionalist architects. And I've been struck by the way a moment would come, and they'd look at each other or look at me, and rather shyly say, "When did you wake up from your brainwashing?"*

NAS: Sometimes I meet people and they don't agree with me. There is an interesting, classic cult sort of response. I talk with somebody and I say I'm interested in architecture. I talk, and they may be nice people. And we go to a certain point, and then they realize what I'm telling them.

MB: *What happens then?*

NAS: They close. Either they turn around and leave, or they just freeze up.

MB: *Further conversation is not possible.*

NAS: There was one particular person, it took a while for him to realize what I was doing. We had several lunches together, and then the curtain descended. But I wanted a piece of information — this fellow is a professor of architecture and he had a piece of information I wanted. So I called his office to ask him for it. And he said, “Don’t you dare call this office again!” He was fuming. This is the sort of response I sometimes get. But let me say something about the self-feeding cycle of the anti-architecture.

MB: *Please.*

NAS: There is a small group of people in key positions in the architectural media. It’s international, but usually this country, Europe, Japan. What happens is that they select the architects. At this moment it’s the Decon architects — the familiar list of suspects, about ten Decon architects.

MB: *It’s a very small cast.*

NAS: There’s a small group of people who are the critics, and the powerbrokers in the architectural schools, and who have key positions. They select a small group of architects, and they publish them in the media — every little sketch these architects do is published in the architectural media. Then the same group of power-brokers award these architects prizes, because these are the jury members of the well-known prizes. And they also sit on institutions that recommend and help people find an architect, for example to build a museum, or a university building.

MB: *These are the people you go to.*

NAS: It’s a small group of people known to everyone. They recommend the same people they have awarded a prize to — and when the building is completed they publicize the building in the media. So you see the circle has closed. And each time it goes round, these inhuman and monstrous buildings are created. It’s like the pebble dropped in the calm lake — the wave spreads out. The people in the street see this stuff built, and they don’t care or know about the philosophy. They just think, “Ah, so this is the new architecture! This must be good because people are paying an enormous amount of money for it, and because this famous architect has won this famous prize.”

MB: *Every element reinforces every other element.*

NAS: And every time the wheel goes around then more and more ordinary people are drawn into believing this is good stuff. Imagine the ordinary person who walks in front of one of these Decon buildings and feels terrible. And who feels physically sick: the adrenaline pumps up in a bad way, the skin temperature goes up, they feel nausea. Yet at the same time they’re told, “This is a building by an award-winning architect”.

MB: *I wonder if the field these days might not be attracting a certain personality type.*

NAS: I think architecture for the last several decades has attracted people who want power. They want power and instant gratification. Architecture as a profession for the last several decades promises instant gratification and power over others, power to shape the environment that other people have to live in and other people have to work in. There is a kind of invincibility. Once you join the architectural cult then you are part of the cult. You have secret knowledge, and you are protected by the cult: “We are invincible because we write the rules and we do what we like, and we impose our buildings on the world. And we impose our idea of cities on the world.” This is a tremendous amount of power. You don’t even have this kind of power in the military. When you join the military, you don’t join up to become a

general, though you may become a general in 20 years' time. Whereas every architectural student is promised, "You become an architect and you get to build big buildings other people will live in".

MB: *When I was in grad school in the late '70s, I got a glimpse of literary theory and recent French philosophy — I could see it coming. You've wrestled with it longer and more thoroughly than I have, plus you're a man of science. How does what's written about architecture these days strike you?*

NAS: I was spared all this stuff. For most of my life I read science, physics, mathematics, biology. I did not read any of these French philosophers, or theory of architecture. It's only in the last two years that I have been forced to address the so-called roots of deconstructivist architecture by delving into the French deconstructivist philosophies. And I just found it to be gobbledygook — gobbledygook combined with a very clear attempt to undo something. It's like a computer virus that erases a hard disk. Both Derrida and Foucault want to erase something from Western civilization. For what reasons I better not guess. They want to erase a particular structured way of thinking. And so they go round and round in a carefully organized wordspace in order to erase the meaning of words ... And to erase the meaning of logical associations. Now that's extraordinarily dangerous, because it undermines the basis of logic and the basis of science. But this is deliberate.

MB: *There's an agenda there.*

NAS: There's an agenda, yes. When you open this stuff and read it, it's gobbledygook. But when you read behind it, you realize that the gobbledygook is a method of erasing. The virus is introduced, and the more you read, the more it erases from your mind the associations that form coherent thoughts. And if you're, say, a young student studying this stuff, it winds up erasing your ability to form logical thoughts.

MB: *What do you think might be behind this?*

NAS: This is only a guess. I find this so distasteful that all I can do is guess. To become famous by doing something new — and this is certainly something new. Others have suggested that Foucault did this because of his very aberrant sexual practices.

MB: *I always thought that what Foucault's writing was really about was his taste for bondage-domination-sadomasochistic sex. But I assume there's a Marxist agenda there too.*

NAS: Sure, there's a Marxist agenda. It's part of the 1968, *soixante-huit* movement. All the rest fizzled, but this hung on.

MB: *I notice that many people barely seem to register a pleasant, enjoyable building or neighborhood. If it isn't flashing at them and turning cartwheels, they don't seem to see it. They don't register that they're feeling good when they're in it, and they don't think of what they're looking at or inside as architecture.*

NAS: Just like a virus spreads after the conditions are optimal for the spread of a virus — namely something has weakened the organism — we have weakened our contemporary society by disconnecting from nature. First of all we destroyed our cities by converting them to purely automobile cities. This is more so outside of New York. We have the media, which is flashy and loud and fast.

Human beings as a biological animal have not changed our perceptions, but we have changed our way of perceiving things. So that really we are sort of numbed. We drive around all day in traffic, we watch TV with commercials every few minutes.

There's this very fast scene-cutting, the hallmark of the modern media. That tunes the human organism so that when you happen by chance to walk into a beautiful church, you have been numbed. It's going to take a while for you to calm down enough to appreciate that this is a place of great beauty and that the beauty is nourishing to you. Most people will sit for 30 seconds, get restless and get up and leave, because of the way the contemporary culture is. These people will enter a Decon building and feel the rush of adrenaline, which is a fight-or-flight reaction, and they will confuse this with genuine peace of mind and nourishment from the environment.

MB: *They feel excited.*

NAS: And it's rapid. It's like what you get from drugs. You can take drugs and you get this quick high, and it's intense. And many people in today's society would like that.

MB: *It's a blast.*

NAS: It's in keeping with the way our society has developed. It's speed and noise and intensity. In the olden days, people would sit down and listen to a Baroque music concert live and get a very positive and exhilarating experience. But it's at a much deeper level.

MB: *Do people today associate this buzzed feeling with an aesthetic judgment of "good"?*

NAS: There is a severe disconnect here — a real psychological and physiological disconnect. It can ruin people's connection to nature. When they're next to a tree, or next to their wife, they get a feeling of comfort. And they don't know how to classify these opposite feelings.

MB: *I'm no scientist, but I've done enough reading to know that there's an actual science of perception. Many people don't realize how much is known these days about how the organism actually responds. Can we talk about that a bit?*

NAS: I'm not an environmental psychologist. What I get is second hand, but I've gone to enormous lengths to get what I can from the literature. But there are physiological tests on the body — the adrenaline level, the blood pressure, the pupil contracting. The fight-or-flight syndrome is an actual physiological reaction. And tests have been done that show that people in certain environmental circumstances react with a fight-or-flight syndrome if they encounter something unexpected, like unbalanced forms, or jagged edges.

MB: *How do blank spaces affect people?*

NAS: It's a different sort of anxiety. Minimalist spaces tend to remind us of our perceptual mechanism failing. The eye can fail, and you stop seeing things. Mimicking an environment in which the eye can fail gives rise to terrible anxiety. You may be having a detached retina, or there are lesions in the brain, and you lose the ability to see detail. You lose the ability to integrate detail into a coherent form.

MB: *How about minimalist spaces?*

NAS: Minimal spaces mimic brain pathologies. The loss of color is due to a lesion — and so much of our award-winning architecture has this horrible gray! This gray mimics what's known as cerebral achromatopsia, which is due to strokes in a particular part of the brain. So all this stuff mimics pathologies of the brain/eye system and therefore introduces anxiety into your system, because it tells you that there's possibly a breakdown of the organism.

MB: *When you started paying attention to architecture again and you ran into modernist orthodoxy, what was your first, non-intellectual, response to it?*

NAS: Well, on first exposure, my first response was, “This stuff is unpleasant.” It was either that or neutral. But especially unpleasant. Even before looking at the theory, just looking at the buildings in pictures and being in them in person, I thought, “This stuff is not nourishing.” Now, I grew up in Greece, and I know that certain pieces of man-made matter can be tremendously nourishing. There are bits and pieces in Greece that are not totally destroyed, that are Classical, Hellenistic, Byzantine, 18th century, 19th century. And I remember as a child that whenever I was near these pieces, there was a tremendous emotional nourishment. I remember that nourishment like having tasted a particular fruit or a cake. It was so strong I never forgot the taste. And that nourishment recurred very rarely, but it did recur in isolated cases in buildings. But most of what’s being built today, no. It’s not there. So it was a function of the geometry of the materials, the configuration ... It was something. And from all the stuff I read it seemed that Christopher was the only one who had any idea about what this was.

MB: *What prompted you to start doing your own writing on the subject of architecture?*

NAS: It came involuntarily. After 15 years of being involved with Christopher it sort of gushed out. I had no desire to abandon what I was doing. I was becoming rather successful and well known, and the last thing I wanted to do was go into architecture. I’m not a trained architect. I have no idea how to lay down piping and beams. But I reached this threshold where the dam overflowed. And I said, “This is probably the most important thing I can devote my time to. It is among the most important things to communicate this to the world at large.” And the realization that Christopher alone with his students was not enough to do that, that he needed someone else — I could offer a very different perspective, and a very different approach and interpretation and approach to what Christopher was doing.

MB: *Are you still as enthusiastic about painting as you once were?*

NAS: I don’t paint much anymore because when I write my papers on architecture, somehow it’s parallel. It’s a similar creative process. And Christopher and I are not really doing architecture. We are looking at how the world is put together. We are looking for the structural basis for life, and how beings connect to that life, and to the universe.

MB: *How do your math and physics friends react when they hear what you’re up to?*

NAS: Some are proud of me because I have gone way, way out of the field and am applying mathematics to real practical problems. Others think that I’ve abandoned real mathematics and they get very hostile. They don’t speak to me. They don’t question the validity of what I’m doing. They just think mathematicians should be doing real mathematics, which is defined as a page full of equations.

MB: *Is there a way to convey to readers what this new way of seeing things put forward in Alexander’s four-volume “The Nature of Order” is?*

NAS: It’s a new way of looking at nature, and a new way of looking at what humankind constructs and builds on all scales — from the scale of a toy or a drawing to the scale of a city. And to be able to relate these scales. We have an infinite potential for creating structures. However, we have to juggle with infinities. Of all the vast possibilities of structures that can be created, only a dot in the sea, say, will have some degree of life, where we define life to have a mathematical affinity with natural structures, living, biological or inanimate.

Most of the things we can construct do not have this degree of coherence and organization. What Alexander does is to pinpoint the dot in the ocean that contains the class of structures that have a degree of life that we can construct, whether it is a drawing or a building or a city.

Now when architects first listen to this, because they are not mathematicians, they become horrified. They say, “You are restricting the choices!” But that is a total misunderstanding, because the dimension of that dot is infinite. There are an infinite number of structures that fit into that dot. It is just that the number of possible structures that *don't* have life is an uncountable number of infinities larger than that. To an ordinary person this just blows their mind. For mathematicians it's like eating breakfast cereal. Following a set of constraints that create living structures does not restrict the number of possible structures, which is always infinite. And how many more choices do you want?

MB: *Within that dot is an entire cosmos, there to be endlessly explored.*

NAS: Exactly.

MB: *When I talk to arty friends about this kind of thing, I notice that they tense up especially about two things. One is the idea that there's some objective way of measuring the “life” in a structure. The other is that it's possible to be scientific about beauty.*

NAS: The answer to both those questions is yes. And I think Christopher is correct in his estimation of the importance of this for civilization. He is not exaggerating. The problem is that people who have not seen the book, they hear snippets, they hear him talking about it —

MB: *And they think it sounds crazy?*

NAS: Yeah, they think it sounds crazy. And it's not. I'm sure we will be vindicated when people sit down and read it.

MB: *How can we convince them in a couple of terse sentences?*

NAS: You can't convince them. They have to get the “The Nature of Order”, to read all 2,150 pages of it, and then to brew on its contents for several years. It's a new world-view that, amazingly enough, goes back to old views that have been erased in modern culture. It links back with religious traditions, philosophical traditions, Eastern traditions, vernacular traditions of architecture, folk art traditions — folk art before it became trendy, that is. It is the whole creative spirit of the human being. The problem is that words have been thrown around for the last several decades, and they've become cheap and superficial. So we just have to wait for five years for this to be digested.

MB: *Some years ago, when Alexander's book about carpets came out, I gave it to a theater critic friend of mine. He couldn't shut up about it for several months after.*

NAS: I predict that when people read “The Nature of Order,” they will find it so stunning they will not be able to respond. And only slowly will they realize how profoundly important and deep this is.

MB: *There's some conjunction around right now: computer science, evolutionary biology, cracking open the genome ... Some threshold has been reaching. And it's resulting in some amazing and fresh thinking about the arts.*

NAS: That is absolutely fair to say. This is cutting edge science.

MB: *I certainly see something similar in the work of someone like Frederick Turner, too.*

NAS: The literary guy? I don't know him, but we are certainly allies. He has deduced independently the need for living structure, and has given examples of forms.

***MB:** He writes about how the literary and artistic forms that persist over time and over cultures represent a kind of literary DNA.*

NAS: These are the kinds of things Alexander and I are saying. When you look at great scientific, political or social revolutions in the past, people start to discover the same things at the same time.

***MB:** It's in the air.*

NAS: I would love to say that it's about to break out, but I cannot predict the exact time. But it's certainly in the air. Computer science is leading to a new understanding of complexity at the same time that evolutionary biology is leading to similar and parallel understandings of complexity. And all this is finally shedding some light on various cloudy issues. Let me emphasize the following fact. I have gone into the scientific literature and used results from it to support results that I have published in architecture and urbanism publications. Which I think is very neat. Now, Alexander is one level beyond me, in that his results in architecture are seen by computer scientists as tremendously innovative and visionary.

***MB:** Right, I read the book about that, Richard Gabriel's "Patterns of Software".*

NAS: So here we have Christopher, struggling with "The Nature of Order" and coming up with results that are found innovative and visionary by the computer-science community — so much so that they invited him to give the keynote speech at a computer-science conference.

***MB:** I saw a tape of that. He seemed startled to be there.*

NAS: He called me, and he said, "This was the shock of my life!" He didn't really believe they understood what he was trying to say. And he gave his talk, and there was a standing ovation that wouldn't stop. It was like the days of Toscanini. And then all these extremely intelligent people talked to him, and he thought, "My God, these people understand what I have been doing better than any architect over my entire career!" These people get it and understand it, and are applying it to software.

***MB:** I often feel ashamed of the arts community. Why don't they catch onto these things more quickly, and more eagerly?*

NAS: There is a lock-out, and intentional ignorance. People on top keep the practitioners ignorant because they're more easily controlled.

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***MB:** From a practical point of view, some of the things you advocate don't seem very practical. No skyscrapers, for instance.*

NAS: Well, no one has asked, "What is a skyscraper?" It's just a very large construction that requires the very latest technology to make it work. Let's look at other large constructions humankind has built — say, a petrochemical plant. Now a petrochemical plant brings together things that necessarily interact, pieces of chemical processes and pipes, because they connect with each other to perform a

technological and industrial task. And every piece of the petrochemical plant is there to interact with every other piece.

MB: *The purpose provides the organization.*

NAS: Right, it is self-organized. Not that things snap into place by themselves, but every piece is necessary because the pieces form part of a larger whole. Because of the nature of the petrochemical plant it has to be a huge thing. So human beings construct a petrochemical plant — horizontally — and it has a specific function. Now when you look at every complex structure in nature it's of that type. The pieces come together because they interact. And they stay together because they interact. And they form a large complex whole that does something. And the pieces are there because they contribute something to the larger emergent structure of the whole.

MB: *Again, the purpose.*

NAS: Right. And let me get to the modern skyscraper. What does it contain? It contains non-interacting parts. None of those parts are there because they *need* to interact with each other inside the skyscraper. Today's skyscrapers, like the defunct World Trade Center, contain people in non-interacting offices. They interact electronically with other people outside that building. There's absolutely no reason for all those people to be there together. It is the antithesis of the formation of a complex system.

MB: *They're just a bunch of monads that have been stacked on top of each other.*

NAS: It's called a heap — a bunch of non-interacting nodes that are just pushed together. An enormous amount of advanced technology is required just to keep them geographically and geometrically together. But there's no reason for them to be together, and absolutely no reason for them to go up.

MB: *What are the disadvantages of going up?*

NAS: The disadvantage is that a skyscraper is like a tree with leaves — what you see up top represents something even bigger down below, its root system. The skyscraper has to be fed. It exists as a concentration of nodes in the network — the electricity, the sewage, the transport. So there's a concentration of nodes there, and when you concentrate nodes things become singular. Too many, and the thing becomes unmanageable. You have to invent more and more technical solutions in order to take care of this over-concentration of the network.

MB: *The city impoverishes itself in order to keep the skyscraper sustained.*

NAS: The city is paying a lot, and sometimes it does impoverish itself — which is apparent when you see the wastelands of parking that the skyscraper creates around itself. The taller the building goes, the more it needs to be supported underneath. If you don't have the support it starts to be parasitic on the surrounding area. If you do have the support, fine. But it's extraordinarily expensive, and the ridiculous thing is that there's no reason for this expense. Why pay for it? You're paying for it because it's a totem — it's like Northwest Coast totem poles. It's a religious totem from the minds of Mies van der Rohe and Le Corbusier. We're worshipping and building these totems because they have become part of our culture.

MB: *Walking around New York City, I'm often struck by how much space the maintenance of a skyscraper can use up. The garbage, the entrance and exit bays — they can easily use up half a block. Yet most passersby don't even seem to notice this fact.*

NAS: But the biggest thing is underneath. If you don't have the tunnels and underground infrastructure of New York City, New York City will come to a halt in

one hour. Of course it's a technological marvel, the ability to do it. But it's extremely expensive. And *why* do it? Nobody asks that question.

MB: *What strikes me most about modernist/postmodernist/Decon thinking is that it's so circular. And it's basic that people who are caught up in circular ways of thinking can't be reached. So what point is there in trying to reason with them?*

NAS: I'm not reasoning with anybody. I'm a scientist. I have always remained a scientist. I present discoveries for the public to see, and I wait for the response from the public. Sometimes I get feedback that's reasonable, and it helps me to sharpen my thoughts. Sometimes I get feedback that is unreasonable, but it doesn't bother me. I see myself creating an edifice that will hopefully live on. I'm building on results that are a compilation of discovered knowledge that is useful for creating things. And people do use them now to create beautiful things.

MB: *I've taken a lot of arts classes over the years, and I know that the idea that there might be any rules or recipes — or that science might play a role in creativity at all — is often seen by arty people as anti-creative.*

NAS: But science can help in creativity. There has been a big lie that science hinders creativity. Let's go to the great artists of the past. They were in part scientists. They mixed their own paints. They had to study perspective and anatomy, the laws of pigments and effects. There was a lot of science in art, and there was a tremendous amount of science in architecture. All that is gone now. The scientist has become the enemy. And in a weird turn of fate you have people like Le Corbusier who claimed scientific support for his ridiculous theories. He had absolutely no idea what science was.

MB: *Yet he had a diabolical cleverness.*

NAS: Claiming that science was on his side was another encapsulation. You have these ridiculous ideas, and Le Corbusier publishes them in his own journal, which he edits and prints, claiming that "The latest findings of science support these theories ..." And then no scientist looked into it to say, "This is nonsense."

MB: *Which is what you're up to when you wrestle with the Decon appropriation of chaos theory, for instance.*

NAS: It's brilliant of them to take these words that they do not understand — chaos, nonlinearity, fractals — and claim that this supports deconstructivist architecture. People reading this think, "Oh, that's fantastic." This is a brilliant encapsulation. It's a replay — it's like re-making the old black and white films in color 30 years later.

A great propagandist, Sigfried Giedeon, wrote this thick book called "Space, Time and Architecture" and in it he said that that modernist architecture is founded on space-time and the theories of Einstein. Well, he had no idea of the theories of Einstein! Completely ridiculous! (*Laughs heartily.*) But this is still a fundamental text for architecture students. I happen to know because I've taught Special and General Relativity. But some poor architecture student, seeing these words on a book, just swallows it.

MB: *They're helpless.*

NAS: Yeah. So now you have the equivalents of Sigfried Giedeon saying deconstructivist architecture is founded on the work of the new scientists. And note the use of the adjective "new". Chaos, catastrophe theory — it seems very exciting. They will describe some of the new science that they've gotten from popular science books. And then, without any connection whatsoever, they will say, "So, the new

deconstructivist buildings are supported by the new science!” It’s a ridiculous association. But since architects have stopped learning any logical mode of analysis, they cannot see that this is bogus.

MB: *I’ve always been struck by how un-intellectual arty creative people often are. However talented, their reasoning abilities aren’t very impressive. And at the art and architecture schools their reasoning abilities aren’t being nurtured.*

NAS: This is true. However, it’s a question of training. You have to train a human being either to think logically and analytically, or to accept a cult. So it is a product of the education. Even totally untrained human beings have a certain innate wisdom that enables them to avoid being sold something ridiculous. However, when you have an educational system that trains people to accept a cult, and therefore does not train them to think logically, then the result is that they’re indoctrinated. Most science students are taught to think analytically and logically. It’s what we do. And that’s where you see the striking difference between scientist types and arty types. It’s strictly a product of their education.

MB: *When I talk to people about these questions, I often find myself winding up in disputes about whether someone’s talented. I don’t find these discussions very interesting.*

NAS: Talent is a word that’s very difficult to touch.

MB: *When you look at the work of a Gehry, or a Hadid, or an Eisenman, do you see talent there?*

NAS: No. But that does not mean they do not have talent. I think it’s really difficult to judge whether they have talent or not. Talent is shown only when you have a certain set of rules, which people refuse to consider. When you give a group of people the same set of rules and you tell them “Here, you create something from this set of rules”, that’s when talent is shown. The more talented person will create the more interesting result using the same sort of rules.

MB: *Without the framework there is no basis for judgment.*

NAS: It’s almost impossible to judge talent otherwise. Now, speaking of talent, I would like to see an architectural education that can teach *untalented* students rules so that they can create a humane building. That is my dream.

MB: *I often think of a cooking education as a model for an arts education. I have friends who’ve gone to cooking school, and they get a rigorous training in technique, as well as chemistry*

NAS: It’s the scientific basis of cooking!

MB: *— and they come out of it prepared to do almost any kind of meal.*

NAS: That’s what an architectural education should be. It should be rigorous, and it should teach techniques. You could restructure architectural education starting tomorrow so that students in the first year start to learn Christopher’s “Pattern Language”, Léon Krier’s “Architecture: Choice or Fate”, and five or six other excellent books that tell you how to do things. And that will parallel a scientific education in which you’re taught how things are and how things work. At the same time, you are taught how to put things together in order to make humane buildings that human beings find pleasure in, that they are comfortable in, and that work in a city context ... And how to build cities.

Now, at the end of this training period the untalented students will have a basic knowledge so that they can go and build a warehouse, a strip mall or a gasoline station that will be not so bad — because they know the basic techniques so they

NAS: It's the same misuse of words. The Decons take the word "fractal" and use it all over the place. They use it to mean "broken," but "fractal" does not just mean "broken."

MB: *What are your hopes for the web-'d universe?*

NAS: Well, let me answer your previous question now. My proudest achievement is putting both Christopher Alexander and Léon Krier on the world-wide web. I did it first. I put a web page up on Alexander, linking to the existing material from the computer-science community. And I kept saying, "Christopher, I've just done this and already I have 3,000 hits a month. People are starving for information. You need to have your computer-science people help you to put up a web page." After a few years he did. He has me to thank for suggesting that. After I met Léon Krier many years later, I realized this was a brilliant classical architect, very different from Christopher. Christopher is a universal scientist who presents universal rules that encompass all of architecture.

MB: *Krier seems like much more of an aesthete and a poet.*

NAS: Krier presents correct rules for a human architecture within the Western classical context. It's very restricted but the results are fantastic. And the intent is the same — it's a slice of the whole pie. But I have tremendous respect for Krier, because Krier has been beaten up by all the architectural establishment for the last 30 years.

MB: *He's regarded by a lot of them as a fascist.*

NAS: Any way to discredit his vision of a humane European city — slander him.

MB: *But on the web, the old bottlenecks vanish. People can get to the information they want and need.*

NAS: Right. Now somebody can go and connect with Alexander through the web — you can find out who he is and what he has to offer, which was not possible before unless you came across a copy of "A Pattern Language." This is tremendously important to people in South America, for example, who keep writing to me. A copy of "A Pattern Language" in South America costs the equivalent of two months' salary. There's a Spanish translation, but it has long disappeared. But anybody in a small town in South America can now log on and read Alexander's work.

MB: *Are you hearing from South America much?*

NAS: Yeah, they keep translating my articles.

MB: *What kinds of response do you get from architects?*

NAS: I have correspondence from all over the world with people who agree with me. Architects tell me how much they've enjoyed my papers, that they're using my papers to design buildings, how liberating this is, and how they're grateful to our group for offering a human architecture. Many people tell me they have been sort of in the closet; they have been terrified of actually doing the things we suggest. And they say, "In reading your papers there is support for what we want to do, and thanks to this support we are doing it now."

MB: *I have the impression of an architectural underground, people who are frightened but who feel and think these things anyway.*

NAS: I get emails from people all over the world who feel this is liberation. I don't want to overemphasize my role. But people who stumble into my writings,

NAS: I'm trained as a scientist. Incidentally, so is Christopher Alexander. And scientists are trained to discover facts about the universe. When we think we have discovered something and it is tested by scientific methods, as opposed to political methods, then we are absolutely secure in our convictions. We are aware of entire fields of civilization based on myths and superstition. So we are ready to defend a scientifically-derived idea against millions of people, and certainly against other so-called established disciplines, because we know that ideas are selected, like in a Darwinian process. The scientific arena is a fierce and highly competitive arena in which ideas are selected by means of verification and reproducibility of results. All the scientists attack the ideas, but those that survive, that means they are verified by the scientific method.

The method of selection of ideas in the architectural world is chiefly authority. Architects and architectural students believe something because it is given by a figure of authority. Scientists, on the other hand, believe something because it has been attacked by other scientists and it has survived. It has survived because you can do an experiment and test it, or because 60 other people have done the calculations and said, "Yes, this is correct". That's totally different. After it has passed this process it goes into the textbooks and it becomes authority.

MB: *You, Léon Krier and Christopher Alexander could be seen as thinking that you know better than people do themselves how they prefer to live. Who's to say they don't like living the way they're living right now?*

NAS: It's true that Alexander, Krier, myself and our friends, who are a considerable number, we believe very strongly that we know what most people would prefer if those people were not brainwashed. Now, many people around the world have been brainwashed by these images and by their education. For the last 60 years or so our schools have been saying that modernist architecture is the future, and they have been propagating the propaganda of the modernists, linking modernist architecture with progress, with hygiene —

MB: *With beauty and glamour.*

NAS: Sure ... And with personal economic success, rational thinking — also mathematically pure forms. All this is very positive stuff. They have made a very strong political linking between their kind of architecture and freedom, with emancipation from the tyranny of previous years. Of course, all this is phony. All these are lies. But they have made their way into our culture. We, on the other hand, claim to know what most people are like because of the inherited biological structure of human beings.

Now, many of these human beings have swallowed this propaganda. They have been conditioned psychologically. So if you ask somebody on the street, there is a probability they will say "I like this stuff! I like the tall buildings made of crystal cubes!" We don't expect that everybody will have the same likes and dislikes. However, we are convinced enough of the biological basis for structure that we expect that when the media stop this indoctrination people can once again find what they really like, and they will agree more with us. And we believe they will connect better with the earth, and with nature.

MB: *What kind of new architectural work strikes you as promising? The New Urbanism, for instance?*

NAS: Sure.

MB: *Alexander apparently sees himself as being on their side but has some quarrels with their approach.*

NAS: Well, Christopher is a perfectionist. I am glad to be part of the New Urbanism, and I'm proud of what they're doing. It's not perfect. But I prefer to see the glass half full rather than half-empty.

MB: *You're thinking mainly about buildings, but your lines of thought strike me as full of potential for thinking about the other arts as well.*

NAS: It's going to be a chain reaction. But I try to ignore that.

MB: *I'm surprised more people in the other arts haven't grabbed hold of this already.*

NAS: Not that many are aware of it yet. But it's a big thing, it's going to occur, and it's going to be a chain reaction. But one cannot even predict when the first phase in the revolution in architecture and urbanism will be finished. And urbanism is occurring before architecture. That was unexpected. But the next stages of the revolution, which will be in the visual arts, music, literature? That's impossible to predict.

MB: *Is there any reason to think that these general principles don't apply in all the arts?*

NAS: They do apply in all the arts. So I'm confident of the revolution spreading. But there will be many battles to fight. Other people will have to fight them, though.

MB: *You've compared the ideology of modernism to a virus. While we could say that a virus is, from our point of view, a bad thing, couldn't we also say that from a Darwinian point of view the virus is brilliant?*

NAS: You cannot discuss architecture with me without coming back to value. Scientists like to put value on things. We spend all our time verifying things. Only when you go out to the wilder ranges of cosmology, for example, where there is no way to verify things, can you maintain parallel theories. But anything you can get your hands on *here* you want to verify. So the idea of right and wrong is a central pinnacle of the scientific method. Also within science there is the question of moral and ethical values, with just a slight stretching of the term. Because we know what is good and what is bad as far as promoting human health, the health of human beings, of society, of ecosystems. And we classify what destroys that as harmful. So in that sense a virus is harmful. At the same time we recognize that it's highly successful in its biological nature

MB: *What has getting involved with Alexander and these ideas been like for you?*

NAS: I see things with a new depth now. I see people and relations and cities and social structures — even my wife and children — in a richer fashion. I see antique artifacts with a new appreciation. It has been a tremendously enriching experience.

MB: *What would you like to get other people to see? What is it most people aren't getting?*

NAS: They're not seeing the beauty of the universe. We have to switch to religious terms now. The universe has a certain beauty, and we are creations of the universe. If you're a religious person you'd say we're God's creations. There is a profound beauty that links us to the universe. And most people are not getting it, because they have been cut off by these silly ideas and silly images. They're missing all this fantastic stuff.

MB: *And you think your work can help?*

NAS: I know that with my work I've helped many people. Even if it is just to let them know that Christopher's books exist. That's a tremendous achievement just by itself.

MB: *There's a mystical or religious side to a lot of this. Doesn't that make you and Alexander vulnerable?*

NAS: It doesn't make me vulnerable. It makes Christopher vulnerable.

MB: *In what way?*

NAS: Volume four of "The Nature of Order" is a profound philosophical/religious work. Alexander started 30 years ago — as a hard-nosed scientist who was not particularly religious — to write this thing. And he kept coming up against the same brick wall. And to get across the brick wall, he found he had to swallow something, like bitter medicine.

MB: *Which was what?*

NAS: It was to accept that some parts of philosophy and religion have something to offer. And of course his curiosity took him across the barrier. So he wrote Volume Four.

MB: *When I got a look at "The Nature of Order" what I was reminded of was Augustine's "City of God". And Christopher Alexander's own buildings have a meditative gravity about them.*

NAS: Exactly. And this is profound, because it was unexpected to Christopher, and he had a Herculean struggle with it — with himself and with it, and with the concepts. Finally he gave in and then it just flowed. And he himself accepted it. I predict that based upon Volume Four Christopher will be awarded the Templeton Prize for connecting religion with humanity. And he will probably be completely shocked by it! But I cannot think of anyone who deserves the prize more, other than the previous winner, the physicist Freeman Dyson, who wrote a beautiful book, "Infinite in All Directions".

MB: *You aren't shy in you own writing about religious matters.*

NAS: I'm a moderately religious person, initially more than Christopher. But I never made the connection. Being with Christopher, it struck me that this is really profound, and that the time has come after several centuries to accept what historical religion has to offer, being extremely careful with all the detritus and negativity that has gone on through the centuries. Some religions at some point have attacked science. But we have to go beyond that because some truths that religion has to offer are inevitable. And they have come from Christopher's understanding of science. If you get something coming out of science and it points toward religion, I'm buying that one hundred percent.

MB: *Modernism, as many have argued, presented itself and came to be accepted by many people as a kind of religion — a replacement for the old religions that so many people had cast aside. You guys have developed a different way of looking at the arts, yet it still has a religious component. But the religion seems to me a kind of glow on the outskirts, rather than a fanaticism at the core.*

NAS: Well, the fanaticism is unhealthy. But I just received fan mail from a Catholic bishop who said he enjoyed my latest article. I was absolutely thrilled.

MB: *The University of Notre Dame, which to my knowledge is the only university in this country that gives its architecture students a classical architectural education, is finding jobs for them building new churches, and renovating older ones.*

NAS: That was the article that the Catholic bishop noticed. I said that the modernists are incapable of designing a church that has a religious spirit in it because all their ideas are anti-religious. It's even worse now, because the prominent Decon architects are being asked to design churches, and they're absolutely atrocious. But they have managed to sell the goods to the established churches, and the churches are paying millions of their parishioners' money to build these monstrosities.

***MB:** They're brilliant p-r people, and brilliant advertisers.*

NAS: I take my hat off to them. It is the public relations success of the century.

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