"Unfoldings" Address by Christopher Alexander
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Introduction by Michael Mehaffy: (Starts at 0:00)

Some of us have been thinking for a very long time, that New Urbanism could benefit from more exposure to Chris Alexander's work on the *process* of creating form. At the same time, we thought that Chris and those of us who are his collaborators might also benefit from some of the advancements in "plugging in", as Andres likes to say, into the power grid of conventional development where, I think we can acknowledge, that new urbanism has been pretty successful. I, for one, do think that we have a common political challenge, all of us, here and fundamentally a common cultural challenge, in the way that we make things in our society today and in the way that we value things in the civilization and also in the way that we perceive the relationship between making and valuing. And so it seems to me that a collaborative approach to understanding how we tackle the particular challenge of making in our built environment, otherwise known as development, is what this Congress is all about and what this session is all about. So, I think we need to get clear about some basic concepts and I'll do that…

Development, after all, is really just another word for growth. So, I think we have to ask what is the nature of this growth? What is growth, after all? What's the nature of the growth that we want? That we love, that we find beautiful? That's enduring and, in some sense, sustainable – and that's on all our minds today. It seems evident enough that we have lots of growth that we don't want, lots of malignant growth, lots of destructive growth. Almost nobody seems to disagree with that in spite the other huge disagreements that seem to be raging in our business today. But so how do we get a much better kind of growth? The kind that repairs and heals and improves, that makes places better instead of worse. How do we redirect the creation of form? How do we feed it? What are the resources we use to do that economically and culturally? And what are the rules of the game, so to speak? And how do we change those rules to create a more intelligent kind of growth today. A more durable and more sustainable and ultimately a more human kind of growth. And I think we're going to have to find more effective answers to those kinds of questions, all of us today, New Urbanists and those who are critics of New Urbanism as well. We have to start collaborating more with one another, and we have to start finding common solutions.

Of course, Chris Alexander, our featured speaker, has spent his career thinking about these questions, and coming up with some pretty remarkable answers both in his writings and his buildings, and in the iteration between the two. And I'm going to show you some of the projects Chris has done because I think it's important to understand how he has been building as well as thinking and writing and the iteration between those two is so fundamental and so critical. And that's been there since the beginning. In particular, he has always been occupied with the basic phenomenon of morphogenesis, of the core act of creating form and the question of how parts go together to create wholes, which, believe it or not, is still a question that we don't know as much about in this day and age as we probably should. I think we're privileged to see, in Chris' work, another very important element of his very long career in this subject, that effort to solve this very tough problem about how parts go together to make wholes emerging before us now. And he wants our help, your help, and our collaboration to figure this thing out. So, if you thought you were coming here as observers, be warned that you are now collaborators, and we've blocked the doors and you're not going to get out of here without becoming our collaborators.

Let me try to set the stage a little bit for the discussion today, and then for Chris' presentation tomorrow, which I hope you'll all see as well, which will go into more detail on some of these points.   Flash back to some forty-five years ago and the first great insight contained in Chris' Ph.D. thesis Notes on the Synthesis of Form, which was very influential in the fields of information theory and computer-aided design, which was very new at the time, and architecture, of course. It noted that things go together, roughly speaking, in hierarchies. Like the fingers on a hand, or the limbs on the body, but the roughly speaking is key, because the hierarchies tend to overlap. And interesting and important things happen in those interlaps, those overlaps, those interstices and that roughness. But the problem is, as his classic paper A City is Not a Tree demonstrated, humans tend to think in hierarchies and tend to design in hierarchies. This can be disastrous for the natural structure of a structure like a city, the interconnectedness that is necessary.

So how do we overcome this problem? That was the challenge that he put for himself. How do we develop tools to manage these overlapping, interactive, web-like structures? That was the basis of his next piece of work, which resulted in A Pattern Language, which I think most of you are familiar with. This marvelous work has been astonishingly influential. It is now perhaps, I understand, the bestselling architectural treatise of all time and spawned a new class of software leading to innovations like Wikipedia, and the Sims, and many other things. And it was, of course, a major influence on the new urbanism and on all of us; and many of us still use it today, I do. It was, in effect, a method by which designers could overcome the limitations of hierarchical thinking by

interrelating elements of the human environment into an adaptive network. But instead of starting from scratch, those elements were themselves pre-existing clusters of elements, in their own right. Fragments, if you like, that could be recombined in endless new combinations much like pre-existing words, themselves, assembled from standard letters, could be combined into endless linguistic structures. And he noted that the traditional cultures have been doing something very much like this, already, for millennia, and that this traditional practice is actually a very sophisticated and powerful kind of language for creating the built environment. More than that, it is an expression of the actual structure of things, this is more than just an artificial system, this is actually a linguistic representation of reality, the way things go together in space. In that sense, at such a language or any language, is useful because it's open ended in just the way that life is open ended. But that really wasn't enough by itself. Merely having the letters and the words was hardly enough to show you how to make beautiful sentences. Somehow, you had to deal with this problem of process, of how you get from the elements to the whole. What is the process by which this language is actually used effectively to create form? What are the steps one must go through? And his search for the answer of that question took him on a thirty-year odyssey into fundamental, scientific, and metaphysical questions about the nature of order itself. Some of us believe the results of that work will be equally as important as A Pattern Language. Because, whereas A Pattern Language is about the structure of things and a kind of library of recombinable fragments of that structure, this new work is about the process of creating the structure. The library this time is recombinable fragments of steps that tell you how to get from one stage to the next, one stage of creating form to the next.

Chris Alexander began with this question; how does nature create the astonishing richness of living forms that we see all around us? What process does it use? What can we learn from that process in our own methods? He draws on insights from many fields including embryology, physics and others, and many of you know there's a lot going on in these fields today that's very exciting. He comes to one central conclusion: nature does not use a plan in the usual sense, but rather it acts to transform an existing whole into a new whole, and I'll explain what I mean by that. In making that transformation, it preserves the structure of the earlier whole but it often amplifies and deepens it in some important way. We can see that process very clearly in the biological patterns of evolution, but we can also see it in our own built history and you'll see, if you've seen The Nature of Order, there's a discussion of the Piazza San Marco in Venice over a thousand years. It was not a construction project for 999 years resulting in what we see today; it was always a beautiful, very appealing place, but it was transforming over time through a series of very clear steps. At every step, the whole is maintained. At no point was the piazza entirely bulldozed and rebuilt according to some architect's bold, new vision. It was, rather, a continuous

evolution. There were bold architectural visions within that structure as disciplined parts of this kind of dance of the centuries. But the steps of this dance can appear deceptively simple and humble, even, much as the letters of Shakespeare might seem deceptively simple and you might wonder how you could end up with something so rich from such modest parts. So too, in the process of creating form, as we see all over in nature, the steps can seem exceedingly simple and modest, but the key is in how they combine, how they multiply in repetition, much like the way two colors of putty, if you've ever mixed two parts of putty in different colors, you'll see that in folding them over repeatedly, with just a few steps of folding, you start to get a very dramatic mixing of the parts. That's the way nature works in these things. It turns out this is very much what we're seeing also in embryology, that there's a kind of unfolding process happening here. It's a key to understanding what the biologists call adaptive morphogenesis: the creation of richly articulated differentiated living structures.

This was a major revelation for Chris in his work. It was not lost on him that humans have done things this way as well in our own cultures, in our cultural processes. We've done that way for a millennium; we just aren't conscious of it today and we haven't incorporated it yet into our contemporary design methodologies. Instead, we have adopted a relatively primitive, earlier form of methodology based more on hierarchical thinking I was talking about earlier, more on templates and blueprints; little fully developed models of reality, which tend to impose their own artificial aspects on that reality instead of adapting to it in the very fine way that nature requires. And he saw that even the pattern language was guilty of this defect. If people use the language to come up with a design planned in advance without a careful generative process to adapt to the site, adapting the form and so on, then the form simply wouldn't have that living quality that was needed and that was achieved by previous generations across so many cultures that we see today. The reform of our unsustainable modern processes of morphogenesis was still incomplete. By the way, the same critique applies, of course, to our work in New Urbanism and he's made that critique and I'm sure will continue to make it, just as he's made it of his own earlier work. That is, and this is an important point, like the Pattern Language, New Urbanism does a much better job of tapping into the traditional patterns that successfully adapted to human need in the past and that are fairly universal, so that's very, very important and crucial.

But the last critical link of continuous adaptation is missing. It's still an imported template, though a more sophisticated one, certainly. It's rightly vulnerable to being criticized as a simulacrum, something that is not truly and fully adapted to its true context and I think we are, certainly unfairly, criticized for that, but in some small measure, fairly criticized for that as well and I think in New Orleans and other places we are taking that and need to take that very, very

seriously. That has the effect of being slightly disquieting, troublesome to even ordinary, non-architects; this is not just an argument with architects. And of course, some architects make a lot of hay with this and claim that New Urbanism is not of its time and so on. That, of course, obscures the horror of what they themselves do instead, people in glass houses throwing stones, perhaps. But it is a real issue, and one that I suggest we must take very seriously as we go forward and as we seek to make New Urbanism a progressive, open source, improving body of work, not simply a fixed doctrine, which it is not.

So here we are, with the opportunity to collaborate with this person who has done some great work in our field, and to implement it. And we want to talk about creating a workable new technology that puts into effect these insights about adaptive morphogenesis and about this very promising and exciting new entity called an unfolding. How are we going to take this forward in the current technology, the current socioeconomic conditions? How can we create a new kind of code based on this insight, a new kind of generative code? Logically speaking, it seems that, logically, this is possible and there are very exciting opportunities to develop this as the Center for Environmental Structure is doing. But what that will actually require is a massive ongoing undertaking, quite possibly requiring the assistance of everyone in this room and many more.

We have some handouts, unfortunately not nearly enough, but I hope you'll come up afterwards and grab one and it'll tell a little bit more detail. Again, we have the seminar room 557, which we can follow up and talk in more detail about the specific concept of unfolding, which I think Chris will discuss tomorrow as well. But, let me just end by quoting from one last section in this handout which is called "What is an Unfolding?"

"An unfolding is, by its nature personal, and requires human input and human feeling from the people doing the work as an essential part of its contribution to the formation of the environment. I believe these "unfoldings", for this reason, come finally, very much closer to the framework of engagement with people, which set me first on this architectural path almost fifty years ago. I believe that, at last, I may have found a way, the simplest of all, of engaging people's feelings, all people's feelings, in the process of building in such a way as to undo the results of mechanical and mechanical mental oppression, which we have all suffered through nobody's fault during this last age of 200 years from 1800 to 2000."

So, this is a very exciting prospect, I think, that we're witnessing the culmination of a lifetime's work and something that is, I believe, will be very useful for all of us, and work that goes to some of the core challenges of our own time, I think. Because, after all, it's time for us to stop rearranging the deck chairs on the Titanic and ask some fundamental questions about the direction that we're headed as a civilization and how we create the surface of this earth. We're all full stakeholders in this process and so I hope you'll see yourselves as real collaborators in this work and in its implementation. And, for me, this highlights

another important historic dimension of Chris's work, and speaking as someone who has studied philosophy, maybe the most revolutionary aspect of all, which is to demonstrate that value is not some mere psychological construct, but is a demonstrable reality that is immanent in the structure of things. Obviously, I won't go into detail on that today, but it is very much at the heart of the philosophy of this.

Value is just as real as structure, and indeed there is no real structure without value, without matter being something that matters, as Whitehead put it. This is not just an epistemological observation about the limits of what we know and can know; it's an ontological observation about the nature of reality itself. Chris has not merely asserted this connection, as so many philosophers have before him, going back to Whitehead and Bergson and many others, he has demonstrated through his work, and this has created a basis for whole new classes of design in many other fields and has been very productive, it has really begun to redefine what it is to design -- aside from these obvious influences in so many fields, I think it is the immediate, intuitive recognition of this quality that gives his work, not only his writing, but his built work as well, its power and its moving effect upon so many people.

So, with that, I would like you to please welcome Christopher Alexander. (applause)

Christopher Alexander: (from 21:23)
(Michael and Chris talk about slides etc.)
I need a stool… okay…

Right! How are you doing? Nice to be here, very nice.

Little bit of a funny aspect of the way the program is organized here, because I'm giving this big speech tomorrow. It would've made perhaps more sense if we had heard that speech and then we could have a discussion about whatever you think comes out of that. But, we're not in that situation so it's a little bit discombobulated.

I think that since "unfoldings", as Michael has so nicely introduced, are at the core of some of the things that I propose, it would help for me to tell you what was happening from way back when (… technical difficulty…)

The original insight about pattern languages recognized that the ways people in traditional societies and primitive societies built their buildings and laid out their neighborhoods and towns, they were actually sequential in nature, that is, they were not so much a freely grouped series of fragments. Let me give you a really simple example, this is about as simple as you can get, and this comes from a chant, a Samoan chant, about how to build a war canoe. This chant is very, very simple. It says, and I'm not going to reproduce the whole chant, I'm

just going to give you the feel of the thing, it says "first find you a tree, cut it down, hollow out the body of the trunk to form the inside of the canoe, begin to shape the ends to form a prow and a stern" and so on like that. And this was an actual chant that somehow people would speak and sing while going through those actions. Now, it's incredibly simple-minded and straightforward. Obvious as it sounds, you can see that this is a very, very far cry from the way in which planning codes work today, or have worked in traditional city planning, or, for that matter, as they also work in the present practice advocated by CNU. It's an entirely different kind of an engine if you like.

Now, I'll give an example of just how hairy this kind of an engine can be in principle. I'll tell you a story of a **clinic I built in California, Modesto**, California, in the grounds of Scenic Hospital, the main hospital at Modesto. The site that we'd been allocated was about 200 ft by about 200 ft, roughly speaking about an acre, and it was for a, basically, out-patient mental health care. I had the director, Doctor Hewitt Ryan, and he had agreed to go through the kind of process that I was recommending to him. We had spent some time working out what, at the point, were some of the patterns that were going to be relevant to the organization of this mental health center. Already that pattern language had this kind of sequential component in it because -- actually all the pattern languages that I do for projects are always like that, only <u>A Pattern Language</u>, which is much more generic, it actually doesn't work that way and so therefore that very important thing is kind of missing from how it is presented in that book -- but anyway, one of the first steps involved, and I well remember a very foggy day, valley fog, in Modesto, and we were out there with Hewitt Ryan and a few other characters who were involved in this thing, I think there were a couple of patients, there was a hospital administrator. And essentially, there was a main drive going in from the road that came past Scenic Hospital, and it went up to the Scenic Hospital itself, and our site was this 200 by 200 square foot patch on the right-hand side. So, I said okay, we've got some concrete blocks out here and some chalk. The first step in this particular sequence was simply, where is the entrance to be? Together with some advice, which I can't even remember now, this was about thirty years ago, but anyway, some advice about the issues involved and so forth. So, we walked about, people were making judgments, you know, and as some of these people were pacing up and down, that 200 ft stretch of frontage, and trying to decide where would be the best place to enter this complex. To start with, we did it, kind of individually. People sort of just walked up and down and made up their own mind a little bit, and then there was some group discussion and so on. We tried placing a few blocks to see, and fairly quickly, as I recall it didn't take any more than about 20 minutes, to, with this smallish group, to reach a clear picture about where it ought to be, and we marked that off with a couple of concrete blocks and with some chalk. Then I said, "okay well, we're done with that, let's go onto the next issue." There was a firm in Sacramento, an architectural firm, who had the… we were responsible for

the preliminary design of this building and the Sacramento firm, which I won't to name, was responsible for execution of the building. And one of their representatives was there -- (what is that… a cell phone? …) Anyway, so this guy, the guy from, nameless office, came up to me in a panic and said, "when you say, okay we're done, what do you mean exactly?" And I said, "We're done fixing the position of the entrance, that is the position of the entrance." And he said, "You mean we're not going to revisit that question?" And I said, "no, we've just come to the conclusion that that's the best place for the entrance, so that's where it is and we're done with that for all time." So, he said, "I've got to get out of here, I'm going back to Sacramento." And indeed, he did. He was actually shaking; he was so panicked by this prospect, that he couldn't take it emotionally. He didn't question that I was serious, he just briefly fell apart. And they did go on to do the executive work on the building and it was fine and then it was built. My point is though, in the case of the Samoan canoe, of course, you also don't go backwards. Once you've hollowed out your tree, you can't hollow it out again and so forth. Now, it might sound as though this is a bad way to make decisions because the 20th century was rife with methods of decision-making and, you know, everything had to be carefully thought through and everything interacted with everything else and so 101 consultants were all going to get into the act. Of course, I know this never happens now, but, anyway, it's enough to drive you nuts and make it impossible to make good decisions. It's a very natural thing to make decisions in this way and stick by them. It puts a burden on you, that you take yourself seriously and that, also, you're right about what you decide. Now, in normal practice of architectural design or urban planning, the entities that are under consideration are so huge, you can't possibly… you can't even talk about a question about "is this the right answer". Of course, people do use that kind of lingo sometimes, but really and truly, it's just too complicated and you just hope and pray that some of the good stuff is going to be there.

Actually, we can't really make a decent environment if we can't trust our judgment even about the simple matter of putting an entrance on a building that's only 200 feet by 200 feet. Around that same time -- I mean this was back in the very, very early 70s -- I did another project, which was a theoretical project, but very interesting. I attempted to construct a pattern language for building a Japanese teahouse. Teahouses are always built in relationship to larger complexes, and so this little thing, step by step, tells you how to achieve it, where to put it, how to form its context, how to go in, how big it should be, how to shape it and so forth. There were only twenty-four steps in this sequence. I was interested in the issue about in what order do you do these things. I mean, twenty-four is a small number but, twenty-four factorials, which is the number of all possible sequences you could have on those twenty-four items, is a gigantic number. I mean, really, up there… I can't remember, I think it's something like 10^{15}. So, I spent quite a bit of time simply working through trying to find out

well what was the difference between a good sequence and a bad sequence. And, of course, the crux of it is that you want to construct a sequence so that the stuff gets laid down and the sequence has the property that when you've laid something down, you don't have to go back and revisit it. You can always tweak it with what you might call smaller -???????- decisions having to do with the finesse of the thing, but you must feel confident that you can actually take these steps one at a time and have the thing come out whole. So, all of this kind of thinking was going on, even in the earliest days when we were still writing <u>A Pattern Language</u>. And unfortunately, the problem that we had at that time was, I mean this was in the days when SOM was king and walls were white, etc., and everything was very, very stark and it was the heyday of late 20th century modernism, really. It was so difficult, people thought that the material in the Pattern Language was reactionary; they thought it was outrageous; they thought it was based on opinion. I mean, you name it; everything was thrown at us while we were doing that work. So, we spent a very great deal of time trying to make it clear what was the functional background of each of these patterns. In some of them we succeeded better than in others, and so we marked which ones we felt were entirely reliable or partially reliable or not too reliable. But, anyway, as a result… so, how long is that book? 1200 pages or so, I always forget… anyway, 1200 pages of detailed exposition, explaining 250 patterns. So, we were just concerned about anchoring down these realities as far as we could, and the format we adopted to do it was the one which supported that kind of empirical thinking and, as a result, taking on the challenge of expressing the sequence in which patterns could be used which is, as you've probably gathered from my two examples, an equally important and critical issue, simply was not present in that work. (Oh, good you're showing all that stuff, wonderful….)

So, in <u>The Nature of Order</u>, I began expressing the idea of the sequences more explicitly. Not only had been using them for many years in our own building projects, but began trying to persuade people that this was the right way to do things. I had some very funny experiences during this. The idea that these things come sequentially, it is not an easy thing to take. I mean, that is exhibited already by the fact of the guy running off to Sacramento like a loony bird.

The… some of these things are very, very big, which are sequential issues, and let me give you an example. Probably the prime issue of regeneration of cities has to do with regenerating the relationship between vehicles and pedestrians. It's been attempted ever since the early 20th century – they weren't really early 20th century, they were around mid-century -- places like Cumbernauld, which is in Scotland, which attempted to rigorously separate all pedestrian from all traffic. It was a complete disaster; it didn't work. The problem has hardly been tackled except in relatively small communities. In a city, I mean you only have to walk from here to the Biltmore and realize how, you know, this is a city which is very much looking to improve its environment,

very conscious of CNU thinking, at least in some parts. The roads completely decimate the downtown, they're running crisscross all over the shop, they're dangerous; you can hardly breathe when you're walking across the road because somebody's going to swing around a blind corner and come upon you from an unexpected direction, and so on. But what's worse than all that is that the pedestrian structure isn't really there. There's a simple answer to that question which has entirely to do with sequence and is, in fact, a content of most of the generative codes that we are now writing. You put down the pedestrian structure before you put down the vehicular structure. It has precedence. To hell with the fact that the transportation engineers and transportation lobby and so forth have so much power, which of course they do which is why we're in the mess that we're in to some extent. But I think it's remarkable to realize that all you've got to do is flip that one tiny switch and say that the pedestrian structure is going to be laid down before the vehicular structure. You're not allowed to lay down the vehicular structure until you've got a coherent pedestrian structure. See, such a simple idea, and that's one line of generative code. Now, I'm not saying it's easy to implement, I'm, of course, and in fact tomorrow especially I'm going spend a fair bit of time talking about the implementation issues that are buried in these kinds of insights. But I am quite certain that once these insights, obvious as they are really, are taken on board and expressed in graspable language that people can think with, I believe it will, in the end, turn out that generative codes, which contain this kind of material, are the way in which we can regain the content of the inner city. Now, the reasons for using generative codes lie much beyond that kind of practical example, although God knows it's important, and I'm not going to talk about that today, I'm going to talk about that tomorrow.

But I do believe that the simplicity of that example, I'll give you a second one just somewhat of a shocker if you haven't thought about it before, and that is that when you're placing buildings, let's just talk about residential for a minute: **place the garden before you place the house**. Now, of course, within conventional zoning that's extremely hard to do just because of the way the actual set-back requirements are formulated and so on. But mainly it's just not something that people think of very often. And yet, what the garden is, as a beautiful place, if you're in a climate where a garden is worth having and that's most climates, you cannot first place the house and then hope that what's left over is going to make a good garden, it just doesn't work that way. You might be lucky, of course, on occasion, but if you want to be sure about it, you need to reverse the order of those two decisions, which will strike people as "my God is he a freaking maniac?" But believe me, that is the way to do it. It is perfectly practical, but again you need modifications in implementation, in various forms of development practice, in the relation between construction and development and so on and so forth, all of which I will talk about in one fashion or another tomorrow. But I hope you can see from these examples…

(What time is it now? How am I doing with time? –- conversation with Michael)

Let me just look at my notes for a second and get a swig of water too…

The thing about doing steps in sequence has one aspect which is incredibly important, and it goes back to what I was saying about the Modesto entrance location. I've got tremendous respect for people's common sense, their ability to judge matters on the basis of feeling. Although I find that sometimes architects and planners make that more complicated than it is, and say "oh, it's really difficult to get agreement" and so on and so on and so forth. That kind of difficulty is mainly because the decisions which are being attempted are too big. For example, if we were to take the area right outside here, from here over to the Biltmore and so on, and say let's work out an improved traffic plan, of course you couldn't get agreement about a question as big as that. There're too many issues involved and it's massive, and you therefore, because these things are going to come on top of each other and all interact, you could attempt, gradually, to work away towards a consensus but it's not the kind of thing where you can feel intuitively "this is right" or "that is right". If you take one step at a time, you really can achieve that. There are techniques for making it easier, but the main thing is, it's pretty obvious, that if you are just doing one little, tiny thing, you can settle what to do. So, the trick is if you break down the whole decision procedure into little tiny decisions that are small enough … they have a thing running on British T.V. right now, the BBC, called Bite Size Revision. It has to do with school kids doing their homework and they've got this cartoon going on about how they're breaking down all their revisions into bite size little chunks. I mean, this is a bit homespun, but the point is that it's the same thing. If you've got a small decision to make, even if there's a number of people making it together and even if those few people are responsible to quite a number of others, you've got a reasonable chance of actually getting the best answer to that small, very limited question. If you can arrange all the questions that you have to deal with, in an order which has the property of what I described with the tea house; that is, that you've tried to arrange them in an order so you that you never have to go back and you're taking them in an order which will succeed in unfolding successfully a coherent object; then, there's real chance of not getting screwed up with the massive confusion that takes place in large public meetings of neighborhood groups, city councils, and etc. etc. etc., which are all quite difficult ways to achieve success with small and intimately personal issues even though they pertain to the larger public good.

So, this business about having "unfoldings", apart from everything that I will tell you about that tomorrow, does have the prospect that human normalcy, ordinary people's feelings, can actually find their way into the form the environment takes. Once again, the political process needed to do that and the development process needed to carry it out and the construction process needed

to build this kind of things do need revision; they need a very solid amount of reconsideration. My opinion is that there is no other way than what I have just described to you. I think that you cannot have an adaptational system which doesn't permit the individual adaptations to occur one by one.

Now, I think I'm probably about done. I have forgotten to do one very important thing, which is: I was so excited when I got up here that I completely forgot to thank Michael. And so, I wanted to thank you for your very nice introduction -- probably better than the main speech -- anyway, thank you very much, Michael, thank you.

Applause

Question and Answers:

Michael Mehaffy:
Let me just say this is an ongoing discussion and collaboration, and I hope this is the first of many steps forward. So, we have about five minutes until the official end of the session, and then maybe we could take another ten minutes or so after that, if anybody wants to … first question:

My name is Anne Lesk, I'm at the Harvard School of Public Health, my Ph.D. is in architecture, and my dissertation was based on pattern language. I studied the six of the most preferred bicycle paths in the country. My work is addressing obesity. I found that there is a pattern in the most preferred bicycle paths. People identify about three to four destinations, and they're a set distance apart. This resonates with Mahler's symphony number one, Beethoven's first symphony, Marriage of Figaro, Hamlet, western tragedy, romance and Japanese flower arranging; that also have three or four parts or endings to parts. So, when people go out on a path or even a sidewalk or a road to bicycle, walk, jog or inline skate, it's a story or a piece of music that is unfolding. The Congress for New Urbanism embraces pedestrians and sidewalks and the car and some transit, but they still do not embrace the bicycle. With sixty five percent of the population overweight, we need more opportunities for physical activity. In the United States, one percent of the population bicycles, it's primarily a white, young male. In Odense, Denmark, fifty percent of the population bicycles, all ages, all genders. In A Pattern Language, there were specific chapters about bicycle paths, about goals, about destinations, about creating the paths. How can we merge the wonderful principles in A Pattern Language with the Congress for New Urbanism and encourage more physical activity in the urban form?

Michael:
Well, here we are. Let me just say, very quickly before Chris responds to that, that kind of research and that kind of ongoing collaboration and development and application and dissemination of the ideas that address our shortcomings as an organization, as well, is what it's all about I think. I applaud your work there, and I think the connection to human health is fundamental as well. Chris?

Chris:
I'm found it very interesting in what you said. I'm not sure I've got a particularly significant, three-sentence answer to your question. I do know that one of the intentions of the CNU organizers and board in bringing me here, was in the hope that we might enter into a fruitful relationship together, which is part of what you were asking about. If any difficulty of achieving that, which may have existed in the last ten years, has come about largely because of differences in process. So, if we can, to some degree, reconcile those differences, I think there's a very good prospect we may be able to work something out.

Bruce:
Hi, I was a little surprised that you were talking about sequences, just plain sequences. Because in nature what happens, as far as I know, all the time is that you have one thing call up another sequence. You know, you wind up with short sequences that are triggered by one event or you wind up with a cycle, which is just a sequence in which the end calls up the beginning. I'm wondering, it sounds like you're talking, I hope that you're not talking… it sounds like you're talking about a sequence that runs from the beginning right through to the end without critical points at which things can go back into a cycle that they do get revision.

Chris:
Of course, the emphasis on sequences of unfolding doesn't alter to the fact that there are vast numbers of sequences going on in parallel, but they are all subject both individually within any one sequence, and in groups, they're subject to overall sequence as well. So, it is as you say, quite rightly, it's a much more complex picture than I drew just in the last twenty minutes. But, the willingness to use sequences at all, that penny has not really dropped yet. So, I think first there needs to be an understanding of the power that comes from using well-articulated sequences to make things unfold and then, by all means, immediately go to the larger question of how these various sequences interact and interlock.

Laura:
I'm fascinated with the idea of the small-scale decision-making process, and the fact that where we get in trouble, and I know this as a designer, is when we think too large. So, what I'm really looking forward to, both Michael and Chris, is hearing about this generative code and how you can incorporate that small decision scale making with the massive amount of development that we're looking at meeting the needs for over the next however long. I guess I can't see how you can do the small with the large.

Michael:
Nature does it very well.

Chris:
I don't think I can venture into that one because tomorrow, at the end of my speech, I'm going to put forward a sort of a charter of changes in regime within the operations of development and planning and so forth. I think if these… without talking about that, it'd be impossible to answer your question. It is, of course, possible to break things into smaller chunks. It happens to be a product of land speculation that it is hard to do in particular. So, one has to go right into some rather deep roots to find a fabric which can carry all of this. That's why Michael, I think absolutely rightly, said we need a large amount of help, we need hundreds of people working on these matters in a fashion where we can actually crack enough of these problems to get a foothold, and … I have in mind to give a workshop in London in September on those topics. Hopefully, people who know a great deal about various aspects of these problems will come to that workshop, and we can really roll up our sleeves and get going together.

Michael:
We should probably wrap up. Just a comment on that: Andres has made the point, in fact there was a discussion between you and Andres in the Katarxis web magazine, Katarxis3.com, if you have a chance to look at that. Essentially, he quoted Gideon, saying "look, we've got the problem of large numbers." Modernity is the problem of large numbers to which, I think without giving away too much of tomorrow's discussion, the response to that is "yes, but look at how nature does it." Nature deals in very, very small steps with vast numbers and does it very effectively, and so we need to learn more about how to do that ourselves.

Chris:
Decentralization, you know, biological adaptation of the vegetation on earth could not happen if the adaptation was not broken down to every cell

in every leaf in every plant. Now, it's worth reflecting on that, I mean I don't know what the numbers are, they're vast of course, and if you say well, ok, given a few thousand developers, how's that supposed to emulate this process which involves literally billions of decision points in the biome on earth. Of course, that in itself doesn't solve the problem, saying that, but it does give you a bit of direction to think in.

Michael:
I see we've got one more person… oh, two more… ok very quickly we'll take those. I know people are going to need to take a break.

Chris:
Especially me.

George:
Yes, my name is George, I'm an architect and I've gone through all of the traditional processes of becoming one, and I greatly appreciate the breakthrough that A Pattern Language has brought into the profession. My main concern is in the participation process, regarding the perception of the individuals involved; I find so many times when you're trying to bring about a consensus, there's a clarity of mind, and I think that your walking about the site brings that about, that there's a definite connection to the reality and the feelings and the energies in that situation, but I find that in most situations so many people, the ordinary public so to speak, may not really have that kind of perception of the reality of the situation. And at the same time, particularly, I find it rather disappointing to see the agendas of the popular cultures that are so ingrained in someone's mind that it becomes a kind of barrier towards seeing really what is in the reality, and their feelings connected to that is trying to get a sort of phony unity based upon an agenda that doesn't really ??????????? to the old, traditional barriers, the ideologies iterate.
That brings my question of the clarity of that intuition and
Mozart, Beethoven, Da Vinci, did he get consensus? So, I guess it's the strength of the intuition and the validity of those perceptions in the participation process.

Chris:
I've got a very quick comment on that, and I think that in the middle of what you were saying I believe I heard you say that it really had to do with walking about with people. It is true that: very, very difficult to get agreement if one is sitting around a boardroom table or a conference group. But if you take twenty people out to look at the situation that is under discussion and if you study it there, and do something about it there, it is

much, much harder for serious disagreements to persist. Especially if what is being looked at is not only down when you're on two feet but also, they are bite size in scope.

Faith Wheeler:
I'm Faith Wheeler, from Tacoma in Washington DC. Wondering if you could help me, give me some advice to… other than saying that Christopher Alexander says so, how would you persuade the powers that be that it's important to first lay out pedestrian walkways before road ways, or first lay out gardens before houses or first lay out transit facilities before developments that crowd them out; first lay out parks for the use of the public?

Chris:
Well, we've begun a little bit by putting some of these materials on our new website, which you I think you probably know because you all had a mailing about it, but I think that CNU is a very capable organization. It's reached a size and a relative strength now so that there are enough people to begin to engage that kind of discussion, perhaps in a targeted fashion where you go to a place where there's an openness to this kind of thinking, and start in a particular community or town or something like that, and maybe CNU could begin to approach more of a task force basis where, if there was an understanding that such and such… an initiative was to be put forward, that various members of CNU could kind of hit on the key players in that community, from a variety of points of view, and generate sufficient discussion so it goes far, far beyond, you know, some crackpot from Berkeley who's now in England.

I'm done; I think you've been very lovely. I apologize for the slightly discombobulated quality of this talk, but, hopefully, if you come expecting some clarity, you may not be disappointed tomorrow. I hope so. Thank you very, very much for listening to me.

Applause.

Michael:
And there are copies of this handout, if you -- it looks like everyone is rushing to get them –- they're also on the website too by the way if we run out, on livingneighborhoods.org and click on the button that says "Unfoldings".