

ED 190  
Lecture 6  
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OK

Mr Alexander:

Now, we've got a general sense of the idea of pattern language, and we also all share the feeling that ~~that~~ the cities and the environment in general are not in great shape. You can put that either in terms of this very global intuition of the lack of organic unity or in terms of much more specific kinds of functional errors which are made over and over again all over the place in the environment. Now, if it's correct that the environment is being generated by a language then it's clear that that language must be defective at this point. And indeed, one's intuitions about it do make that fairly obvious and likely. Whereas looking at those barns I showed, one has the feeling of a reasonably well integrated series of patterns; the connections between them are <sup>very</sup> ~~fairly~~ well thought out and nicely coordinated. Looking at the kinds of recurrent patterns that are generating cities today, remembering that one is able to give all the examples up from the regional scale all the way down to the <sup>scale</sup> ~~detail~~ of window details, that nevertheless there is a <sup>little</sup> strong feeling that many of these patterns exist as kinds of isolated bits and ~~pieces~~ pieces; that there is more of a patchwork quilt arrangement of patterns available now than any sort of an integrated language. Whether that intuition is correct or not, it is quite clear that something must be wrong in the generating language now; otherwise the environment would be alright.

Now there are two possible attitudes to this. It's these two attitudes which we are going to discuss during the next week. One attitude says, look, the whole idea of a language is really bound up with the <sup>idea of a</sup> ~~the~~ traditional culture and although it's true ~~that the~~ ~~a~~ maybe that barns were built by languages and maybe Georgian London was built ~~that way~~ like that and some beautiful huts in ~~St~~ Calabria, that is an archaic notion and it was alright for a



traditional closed society, but not usable for ours. And so we've got to scrape the whole idea of a pattern language and try and find some other ways of reintroducing organic unity and functional adequacy into the environment. This, obviously, is the first attitude, and although it's not been stated that explicitly, I suppose that that really is the attitude that many architects and planners have. To discuss that, look at some of the specific proposals which are being made today about getting functional adequacy and unity back into the environment. There are a lot of categories. I'm just going to write these categories out now.

Architecture/Planning/Advocacy Planning/Urban Design/Systems Analysis/  
Criteria, Performance Standards/Building Systems/Mass Production/Leave It  
To The Developers and Builders/ Policy Planning/ Better Prototype Handbooks.

Architecture and Planning are obviously the first two ~~eat~~ kinds of devices that have been introduced to try and deal with the situation which is no longer taken care of by a traditional language. They're both very recent introductions. Then, more recent is advocacy planning which is based on the idea that in order to get the environment sensitive to human needs in the ~~and~~ fullest possible sense, what you have to do is sit down with all the members of a community and reason it out with them, how their environment is going to be so it gets well adapted to them. This is a fairly new kind of idea. Urban Design, which is in a sense an amalgamation of the first two, that is, it is a way of using the sorts of techniques, ways of thinking and handling problems, that architects have on matters of larger scope, is something that's just been introduced recently; clearly an attempt to get organic unity back into larger scale projects. Systems analysis, whatever that means; I mean it covers a wide scope of things. The general idea is that in order to get organic unity back into the environment, you have to



large complexes, you have to analyze them as systems. As I said, it isn't quite clear what that means... Then, lump those together, the Propagation of criteria and performance standards. The idea here is that it's not so much that the architects and planners are wrong in what they are trying to do, but ~~the criteria~~ what's wrong is the fact that nobody quite knows what the criteria should be for what they are trying to do, and therefore the way to get everything right again is to start propagating these like mad. Building systems; the idea of constructing kits of building parts which will go together in certain ways and therefore make it possible for the designer of building parts to influence a much larger number of buildings than he could do by designing individual ones. ~~and~~ And related to, that very closely is a slightly more extreme version which I just call mass-production. It's really very closely tied to that. It's just a question of how large the mass produced component is. Leave it to developers and builders; some people advocate that on the grounds that those are the people who are doing 90 percent of the work anyway. Policy planning which has something of the same tinge to it as what I've been talking about; it's based on the notions that ~~it~~ for instance, that it is decisions in Washington about FHA regulations ~~that~~ and decisions at that level that really make fundamental differences in the environment and therefore there's ~~no~~ no sense in getting into the environment at any level except that one if you really want to influence it broadly. Better prototype handbooks. That again is more or less in the spirit of what I've been talking about. We've seen that there are handbooks in use anyway, so some people take the attitude that these handbooks should...be a lot better.

Now, I can't really discuss...I want you to write all these notes down and also to add to them if you can about broad categories of effort that have it in mind to try and reintroduce organic unity and functional adequacy in the environment. Now... So that is one whole attitude to the environmental



pattern language. It says that it is an archaic idea. It's necessarily a part of open society that a shared language of that ~~type~~ kind becoming quite unwieldy. We can never get control of it again, we can never organize it again, so we have to go into one of these techniques. So the other attitude is that there are things which this language does which are so crucial that they cannot be done by any of these techniques and therefore no matter how difficult it might be, we have to reintroduce the idea of a pattern language ~~make~~ and actually make it work, even though it seems to be going down hill now. Now that of course, ~~/~~ that second attitude, is the one that I believe in.

In order ~~/~~ to attack these various possibilities or to show up their deficiencies, I want to draw attention to three important functional features of the situation where an environment is generated by a language. and then we will be able to show fairly easily that none of these techniques really possess all these three features.

The ~~the~~ three features are ~~easiest~~ easiest referred to, I think, by the words memory, coordination, and variety. Coordination and variety I will discuss next time; there's slightly less to be said about those. Today I'm going to discuss the need for a cultural memory.

The main difference between animals and men is the fact that an animal lives entirely on the basis of its own experience that is gained during its own lifetime. There's no handing down of experience from one animal to another except in a genetic sense; that's very slight. So obviously, each of these organisms is capable only of getting into problem solving as its own experience allows it to. What distinguishes man is the fact that he stands on the shoulders of millions of people before him and is ~~/~~ therefore able to go further with the solution of problems instead of having to recapitulate all the time. That's a very very obvious point. In that sense,



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a culture, which provides each man with a series of institutions which are in fact solutions to problems is a memory in just this sense. To take an obvious example, in everyday life we don't attempt to solve problems from scratch all the time, but we do make use of the cultural institutions which are known more or less to solve these kinds of problems. So if we want to solve the problem of bringing up children, and eating, and sleeping, and sexuality, we don't think through for ourselves, always, what is the best way to deal with all these problems. We simply borrow a cultural institution, namely the family, and build on that. Of course, these things are in evolution all the time and are liable to be changing, but we do not, for each separate problem, try to solve it from scratch. To some extent in Architecture a very very unhealthy kind of attitude has been introduced which does give the illusion to architecture students that are to solve problems from scratch. I think this was introduced probably about the time of Gropius, and it was an effort to get away from traditional patterns which, it is true, were not making much sense and therefore need to be superseded. But the people that said, look we've got to take a harder functional look at what's going on in a building or a city really threw the baby out with the bath water. They were right that they wanted a deeper functional look at what was going on but they were wrong, I think, to introduce the idea that architects should try and solve problems from scratch. That's a fairly pervasive idea; I felt it myself. Those of you who have read my book probably realize that ~~it's~~ the whole tone of it is written in exactly this way. It says look, if an architect is faced with a particular problem, how can he lay that problem out for himself so as to solve it (from scratch/ is implicit.) And I think that this is certainly the way that one is taught design in a design studio. The point is, that this has as a consequence the fact that ~~solutions do not~~ valid solutions do not get propagated or



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remembered and invalid solutions don't get thrown out.

Lets take ~~a~~ an example. In this building at the end of the design studios on each of the studio floors there are two seminar rooms. Those seminar rooms are about that shape <sup>long</sup> (~~this~~ rectangle) and the window is here ( at one narrow end) and blackboard is here (along long wall) and they are equipped with <sup>long</sup> tables of about that shape (~~this~~ rectangle), and the door is here, somewhere (at narrow end opposite windows). This thing is functionally defective in a number of different ways. First of all, that shape table and that shape room is not very good for a discussion. Something of a closer approximation to a square or a circle works better. So the shape isn't good. Secondly, because the relationship between the window and the blackboard, all the people sitting anywhere in this half (away from window) of the room are getting window glare from the blackboard so they can't read it, which is the second mistake. A third mistake is that ~~the window~~ because the window is sufficiently low the people that are sitting here (away from window) see these people silhouetted against the light. And it's well known, for instance ~~if~~ by executives in offices, that if you put yourself in that position vis a vis someone else, that is, your silhouette against the light, so they can only see your silhouette, you can't talk to him properly. So that also breaks down the communication in the seminar to some extent. There's really no reason for those mistakes to have been made, except that as ~~as~~ a profession we ~~are not~~ possess no device by which these kinds of points can be remembered and built upon. In other words, I'm not blaming the architect for this, because it is unquestionably true any architect, no matter how good will be bound to make mistakes if he starts by trying to think the building through from the beginning for himself. He can't help it; he simply can't grasp all the issues and hope to solve them all for himself. So what's at fault here is not something about the architect, but something



about the lack of a memory in the profession. This business of memory is very difficult in a selfconscious, open, free-wheeling culture. See, in a traditional culture it's true that items like that were remembered, but very likely they were remembered by kinds of shared traditional agreements and besides, everything was changing slowly enough so that these issues were not easily forgotten. Just by being traditions, by putting on the brakes on innovations you take care of memory fairly well in a traditional culture. In an open society when it's everybody's freedom to have as many ideas as he can think of and to innovate and when there are millions of people all innovating simultaneously it is very very difficult to create a memory. In fact there are only two institutions in modern society that have ~~ere~~ succeeded in creating memories that work in the open society.

One of them is science and the other one is law. Science is by far the more effective ~~of~~ of the two. Effectively, the body of propositions in science constitutes a memory. What happens is that every time somebody does an experiment he tries to record the content of his experiment in an abstract form which commonly known as an hypothesis. And this hypothesis is of course supposed to be a statement about the world. These things are all true, but what's not usually brought out is the memory character of this whole enterprise. Because the hypothesis are constructed in such a way that they are under public scrutiny, anybody can disagree with them, anybody can do an experiment which sheds light on the hypothesis that is part of the current memory, this thing is ineffective because everybody throughout the world feels that they can belong to this same body of experience. That is what a memory is, a body of experience. And the body of experience is constructed in such a way that they're all quite ~~all~~ free to do what they want and yet able to share this body of experience.

To some extent the same thing happens in law. It isn't as highly developed



because the fundamental mechanism ~~revolves~~ ~~is~~ in law, is that of precedent, rather than that of abstracted principles. So that when the scientist abstracts an hypothesis from his experience and then makes that thing, so long as it remains valid; that is the item which carries the memory, which is the memory. In law the principles are much thinner and one makes use of case histories, of actual cases recorded in book after book. Nevertheless these are recorded in such a way that it is quite clear that one draws on previous ones and that there is a tradition that has been built up among lawyers that that is the way to operate.

Now, Architects and planners have completely failed to ~~solve~~ this problem for (American) society. ~~If~~ I think it's quite clear that there must be such a memory; my trivial little example about the seminar room is not very large in scope but that point can be expanded endlessly, to cover any problem at any scale; you can find your own examples. So it's quite clear that we need a memory. The question is how to get one. I will try to make the argument that an attempt to impose it from the outside is certain to be fruitless, or to take the system in the wrong direction. I don't want to get into that today.

The key feature in memory is abstraction. There is no point in remembering an event in its totality; if you don't succeed in abstracting something out of it what you've remembered is essentially useless. In architecture in particular, and in most of the design disciplines, we are very very bad at abstracting from other successful solutions the features that made them successful. Or by the same token, in abstracting from bad solutions, the features that made them fail. Of course, part of ~~that~~ the reason for that is that we don't have agreement among ourselves what constitutes failure and what constituted success. And that we will be discussing quite shortly



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because the moment one can get the agreement, obviously this becomes possible. But nevertheless, it is clearly necessary to have abstracted units which will constitute the fundamental units of memory in the culture. I'd like to bring this home to you. I don't know to what extent there are among you people who disagree with this point. You may feel that people do already abstract from a successful building and up to certain very limited sense this is true. It is true of course that architects are constantly looking at one another's buildings trying to learn from them. But ~~the~~ this is always done at a personal level. You will not see in print abstractions about buildings which are useful in the sense that they can be extended to cover other cases. For instance, in the way that I just did it with this seminar room business. To make the point clear, I'm going to show a slide I just took a few minutes ago. The point I'm trying to make is this: architects are often very sensitive to what's around them and they enjoy places that seem to have some quality and take pictures of them. What they don't do is to abstract the qualities from the situation in such a way as they can use the properties they have abstracted again in ~~another~~ another situation. In other words, I think anybody might enjoy this particular entrance and might perhaps even try in some ~~conventional~~ ~~feeling~~ personal way to get something of the same feeling, whatever that means, into another entrance if he were designing it. But as for his really getting hard nosed and saying look, something is making ~~this~~ ~~the~~ this entrance work very well. What is it? What ~~physical~~ aspects of the pattern make this thing have the quality it has. And to this so insistently that the results become usable and reproduceable.



I want to make a comment about why it would be very very difficult to do it % in the case of this entry. I think it's clear that something has been achieved there and it would be fantastically difficult to discern just what it is. There is a very prominent kind of attitude among designers which would say look, this is impossible. This thing is an integrated whole and it works in such a way and you just can't abstract out of it properties by numbers which are contributing to its success; it's a unity. There's no hope in trying to do this sort of abstraction. I think this is a common attitude and I want only to make the following point: that attitude has been propagated by people who maybe found it difficult to do, and it is hard to do, but ~~et~~ to make the assertion that unity in organized things cannot come about as a part of a process of piecemeal abstraction, and putting together, must be false, simply because there are at least two cases we know ~~where~~ of where this is happening all the time. One of them is the genetic case which I mentioned last week, for we know that genetic evolution takes place gene by gene ~~and~~ and none of us could doubt the ~~fate~~ fact that the organisms produced by evolution are very very highly organized systems. They certainly don't have a piecemeal, atomic character. So that is one instance of a kind of object that has been produced as a result of successive, piecemeal changes. The other example is anything that is produced as a product of a language, like the barns we talked about. We know that the insights there must have been produced after a process of gradual abstraction, because that's the way the human memory works. Those things were ultimately produced by something that is imbedded in human memory and since human memory does work by abstracting things piecemeal... The only question that we face in this example here and in our efforts is how to do the abstraction. But the attitude that abstraction does not work I think doesn't hold water. In your critiques today it might be worth...



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trying this.

Questions: Not quotes

Why "language" rather than rule system?" Constraint and freedom, variety, richness. How about music? Language has more of a sense of communication.

You can't talk about the language of one object; a language is essentially a thing which is capable of generating a family of objects. If you can't see the family, you can't know the language.

An abstracted element might become an element of the language, but not necessarily.