OK

I'll give a fairly short lecture today, ~~I think.~~ For the last $9\frac{1}{2}$ weeks I've been talking about the pattern language as a device. - that is as a tool for making better environments. And in this last lecture I want to focus on the pattern language as a thing potentially valuable in itself. That is, on the pattern language itself as a work of art and the process of constructing it as an artistic process.

Let me just take it first of all x from the point of view of the individual patterns and from the point of view of one person making these patterns. We haven't discuss at all the fact that each pattern is potentially a very very intense symbolic statement about life - about something in the environment connected with life. So far we've been viewing these things as very dry prescriptions following all kinds of mathematical conditions. From the point of view of a maker there is the task of condensing the meaning of an individual pattern into a very very tiny <u>compass</u> so that it comes across -- bang -- like a poem or like a very very concentrated graphic symbol. This isn't entirely without function either. If you cannot succeed in collapsing the meaning of each individual pattern into a very small compass, people won't read it; they won't pay attention to it. You have got to get the point in each individual pattern across within instants. And the process of making these individual fragments of poems is just like any other attempt to make poems because for the maker it is an effort to create condensed symbols of meaning within which he can encompass the whole of his life and the life around him as he sees it. And in a sense the pattern language as a whole, however big or little you see your part in creating it, is potentially a kind of gigantic alphabet of symbols in the same spirit perhaps as the kind of thing Paul Klee dreamed about.

Of course, the production of these concentrated meanings is a social process and not an individual process; and in that sense, insofar as it is a matter of art to construct this thing, it is a communal work of art, and that is where this kind of

collapsed, very intense meaning of each individual pattern becomes doubly crucial because many, many people will not be able to work together on constructing this gigantic poem unless the intensity of each little piece of it enables people to grasp the whole thing quickly, the makers of it.

Now, potentially I see this process as being one which could engage very, very large sections of the society, not merely members of the design profession. In other words, if you stop concentrating for a minute on the technical aspects of the pattern and focus on that matter which I have already mentioned, namely, the part which persons can play in the process of advocacy and the way in which each one of them, however expressed, contains a common-sense meaning about life which everybody can understand and recognize and disagree with or respond to, it becomes fairly reasonable to hope the process of creating these things might become a really widespread one, comparable perhaps to the writing of haiku in Japan where there is something like a million writers of haiku today, or comparable to a process in the Islamic tradition where in that part of the world everybody carries around with him a book and in that book are written many, many fragmentary poems, and during the course of everyday life people will pull out this book and give you a poem; they will pull out one of the ones in their book that seems particularly relevant to the situation which you are experiencing and they give it to you and you will often write it down, and this constant writing down of this stock of poems and the exchange of them is completely wrapped into the normal course of everyday life because it is understood that these things are not just something which you do on special occasions because they have constant bearing on what you are doing every day. Now, again the process of inventing those things and exchanging them and discussing them and bringing them out at relevant moments and seeing the way in which they tie into situations that you confront is an absolutely normal part of that culture.

Remember that the patterns which we are talking about are not purely concerned with building forms; they are concerned with the whole spatial structure of the city

and the structure of the situation that it offers and that, therefore, in that sense it will be a very, very real kind of thing for every individual to be grappling with constantly and that each individual's persistent effort to build this stock of patterns up would become a perfectly normal part of his own efforts to understand everyday life. Now, there are certain technical prerequisites for something of the sort I am just describing, communication prerequisites; in other words, it is clear that these things need to be transmitted and how could everybody possibly have access to them, how could everybody have copies of the relevant material, how could the copies be distributed rapidly enough. Right on the horizon now there are already very remarkable devices which would make the sort of thing I just described possible, certainly within two decades. For instance, in an essay by John Platt called "Where Will The Books Go," there is a description of a universal library system in which with the kind of microfilming processes which exist today already, just pushed slightly beyond their present limit, it would be possible for everybody to have the entire stock of books and volumes in the world on half a shelf in his living room. It is a perfectly feasible conception. There are about 20 million volumes now in circulation, and it is possible by going to the limits of optical resolution to get a whole book down onto a single sheet about the size of one letter in an ordinary book and with that kind of reduction you could represent 2,000 books on a page, a million books in a single volume, and 20 million books on half a shelf. Now, I mention that example because it is only with the power of things like that that it becomes even conceivable that the elements of the pattern language could be that widely available and that widely spread around; and in fact, remembering the kind of general analogy between the genetic material in its relation to an organism and the pattern language in relation to a city, it seems perfectly conceivable that just as all the genetic material is present in every cell of an organism, so all the pattern language would be available to every individual if it became clear that this was an ongoing part of the effort of people to understand their world and to make it over.

I say something very personal now which, if you like, you can regard as science fiction. In the last 20 years there has been a remarkable thing happening in physics. A number of physicists have begun to relate themselves to the philosophy of the Upanishads, to the idea that matter in the process of organizing itself is merely a manifestation of a universal mind behind. For instance, even from a very prosaic astronomer, Sir James Jeans, he writes: "Today there is a wide measure of agreement which on the physical side of science approaches almost a unanimity that the stream of knowledge is heading towards a non-mechanical reality. The universe begins to look more like a great thought than like a great machine. Mind no longer appears as an accidental intruder into the realm of matter; We are beginning to suspect that we ought rather to hail it as a creator and governor of the realm of matter. Not, of course, our individual minds but the mind in which the atoms out of which our individual minds have grown exists as thoughts." And another scientist by the name of George Wald, a biologist at Harvard, calls the physicist the atom's way of knowing about atoms.

The most remarkable statement of this kind is one which some of you are probably familiar with, that of Teilhard de Chardin, a Jesuit priest who was an anthropologist, a physical anthropologist, and in a book called The Phenomenon of Man he describes the way in which matter as it evolves produces consciousness. His thesis put quite crudely is this: He says you start out with the interstellar gas which is relatively undifferentiated, uncomplex, and gradually you have a production of atoms, first atoms, then molecules, then very, very low order cellular organisms, and then more complex composite organisms, and finally man; and as far as he is concerned, the increasing complexity in the matter is the sole thing responsible for consciousness, and he treats the correlation between that complexification of matter as an automatic antecedent of consciousness. He says: man in his individual and social state represents the most synthesized form in which the stuff of the universe is available to us, but it is perfectly clear that there is nothing necessarily

taught about the level of complexity which matter has now reached in the form of man.

Now, these kinds of thoughts lead rather naturally to the question, if all that stuff is true, what is the next most complex form of matter that is going to appear in this gradual evolution of more and more complex forms and will it have a greater degree of consciousness in any sense. And that speculation leads fairly naturally to the idea that the city, thought of simply as an organization of matter, is a very likely potential candidate for this next level of organization being produced as matter rolls in upon itself. Now, I believe that personally, and so for me it becomes important to see what the relation is between the pattern language and those concepts, and there are relations, obvious ones. First of all, just in the production of organic complexity, the pattern language seems to play a fairly crucial role. Just as -- I think I mentioned this at the beginning of the quarter -- if you are interested in building a flower, you would not conceivably try to build it with tweezers cell by cell. You know that any attempt actually to construct such a complicated thing would lead to nothing; and, in fact, the only flowers which have been constructed by man are plastic flowers, and, if you want to make a living flower, the only thing you would be able to do is to invent some chromosomes, some genetic material, some DNA, and let it loose and let that generate the flower. Now, that seems typical of the process of producing complexity in the first place. If it is true that the city is potentially more complex as an organization than man, it is quite certain that the process of producing that complexity would have to be genetic like a language and could not be design or construction in the traditional sense. So that part of the thought is clear.

What becomes more interesting is the suggestion that the production of this language is a communal work of art in the sense that I described it, one in which many citizens would participate, would be throwing their own poems into this much more gigantic poem, because that effort is precisely what we mean by consciousness. In other words, there you would have the phenomenon of a group of people sitting down

together and together trying to create a picture of themselves as a collective whole.
Now, curiously enough, that is something which is not going on in society or in
cities today. There are no deliberate efforts by groups of individuals to form
pictures of themselves as a collectivity, and yet that is precisely what we understand
by mind in the individual sense, that is what we mean by consciousness. It is a
process in which something is building a picture of itself and its relation to the
world. So that in that sense, if there were this ongoing process, this ongoing
communal art, it would be a process in which the members of a city would be coming
to know themselves through the pictures of their own making. And it is not
surprising, of course, that the technical material on memory that I gave you earlier
in the quarter shows that this language must have precisely those characteristics
of a human mind in the sense that it is constantly rewriting itself as it evolves.

So I started out by saying we have been so far thinking of the pattern
language as a device, as a tool, as a way of making the environment; and I said that
today I wanted to consider the fact of its being valuable in itself. Each person
can use the pattern language in two ways; he is both the carrier of the information,—
of the pattern—which will generate an environment and he is also benefiting directly
from the patterns themselves in the sense that they nourish him by providing him
with pictures of what the urban world is like. The pattern language is both an agent
in the production of that complexity which the city needs to make the step beyond
man and is also, as a poem, the manifestation of the consciousness which would appear
out of that complexity. The language is both a blueprint for the singer, and the song,
~~if you like. That is a very personal statement. I think it would probably be~~
~~inappropriate to try and have a discussion about it. That is all I have to say.~~
~~Thank you/for listening to me this quarter.~~ very much