ORIGINS OF PATTERNS & *A PATTERN LANGUAGE*
Impressions of Experience

by Sara Ishikawa

Berkeley

By the time I met Christopher Alexander in 1963, he had written many articles and some books that led to the theory of *A Pattern Language*. He had visited Berkeley in the spring of 1963 and gave a lecture on A City is not a Tree, and had just finished his dissertation, Notes on a Synthesis of Form, which put forward Hidecs as a mathematical model for design. He was thus known as a new brilliant theorist, and was offered a position at Berkeley in the fall of 1963.

BART

Right after he came, three of us – Chris, Van King and I (Van and I had just graduated in the spring) started working together at Wurster Bernardi and Emmons on the Conceptual Design of BART stations. We collected functional requirements, visiting a number of transit systems and adding Mike Baker and Patrick Hyslop to the team, we went through a process of interacting each requirement with every other and used Hidecs and the computer to generate relational complexes, much like in Notes. At the end of our involvement in that project (our work was never used) it was clear that one did not have to go through this elaborate and time consuming process to come up with the relational complexes which were in fact recognizable and identifiable parts of the environment – i.e. entrances, ticketing, platforms, etc – each made up of parts in some relation to each other. While this work at WBE was going on, Chris was teaching courses that also focused on developing the idea of what would later be called patterns. One seminar in particular was important as each person in it developed what would be called a pattern, and some of them – Murray Silverstein, Ron Walkey, Christie Coffin, and Solly Angel subsequently worked at the Center.

CENTER FOR ENVIRONMENTAL STRUCTURE

In 1965 Chris had to leave the U.S. for visa reasons for a year and he did further work on what he was then calling environmental rules at the Ministry of Housing in London before coming back to Berkeley. I was in London in 1965/66 and worked with Chris briefly and informally on entrance 'rules'.

In the spring of 1967, he, with the help of Murray and me, put together the Center for Environmental Structure, and with a small grant from the Bureau of Standards, held a seminar that summer in Inverness to work on the theory of patterns with Sim Van der Ryn, Roz Lindheim and a variety of interdisciplinary experts that Chris knew from the East – a psychologist, a linguist, a transportation person, etc, and I believe it was at this seminar that it was decided that the word pattern seemed the best way of describing these environmental rules or parts of the environment since they kept repeating to form the environment and that language seemed the most appropriate word for describing how the patterns were related to each other. That fall, Chris, Murray and I worked for a short time on patterns for a small storefront Poverty Program office in Berkeley where Skip Porter, a friend of mine was director, and Chris continued organizing the Center into a non profit research corporation with himself as president and a board of trustees that included a top lawyer, the dean of CED at the time, and a few professors, all of whom supported the idea of the Center.

MULTI-SERVICE CENTER

In the winter of 1968, Ken Simmons with whom I worked in the Poverty Program in San Francisco in 1966 and who was then director for Urban America's contract to develop a program for a new multi service center in Hunts Point in the South Bronx gave us - Chris, Murray and myself - the opportunity to develop patterns and a pattern language for the project. I lived in New York to work on site and Chris and Murray came often to New York. We worked with Ken, Mike Baker and a team from the City of New York in developing the patterns. This program was eventually published as *A Pattern Language which Generates Multi-Service Centers*. For the patterns, we used the If, Then, Problem format. The language was represented as a cascade – larger scale patterns at the top, and smaller scale patterns cascading downward…In the book we

patterns in that these patterns could also work to design multi service centers – of various sizes in different geographic areas - urban and suburban. The project for Hunt's Point was eventually designed by Max Bond who pretty much followed the patterns. The built project and the services housed there are a success in their effect in alleviating poverty and crime in the community - as demonstrated in a 25th anniversary celebration of the Multiservice Center in 1997.

Figure 1: 'Arena', Hunts Point Multi-Service Center, South Bronx, NY, 1984.

NATIONAL INSTITUTE OF MENTAL HEALTH

Right after we finished the Multi Service Center project in the summer of 1968 we got a large grant - about $300,000 from the National Institute of Mental Health to develop the pattern language. Under this grant, in between and during projects we, with a great deal of help from graduate students and others, did quite a bit of experimenting with the format of the patterns to see how patterns should be worded for them to have the best results for users using them to generate designs – how emphatic and how prescriptive they needed to be. We also investigated how patterns were related to each other horizontally and vertically – and how generic they were within the boundaries of various contexts and how they should be sequenced for people to be able to use them in design. Very important, we also experimented in ways that a collection of patterns could be accessible to anyone wanting to add on to it and to improve patterns already in the collection. We worked for a while with a loose leaf 8-1/2 x 11 format which we in the end decided was too cumbersome to realistically manage.

During this time and while the Peru project was going on, Ron Walkey worked on the Japan Expo exhibit for which he did all the graphics for urban and community patterns, mostly expressed in one sentence, from all the various

people including students who up to that point developed patterns and he displayed them at the fair in Osaka. The patterns were published by the Center, as A Human City in Japan with Japanese translation.

Figure 2: CES, 1969; Mary Louise Rogers, Sara Ishikawa, Chris Alexander, Ron Walkey, Christie Coffin, Denny Abrams, Murray Silverstein.

PERU

In the winter of 1969, Chris and the Center was invited by the U.N. to be the U.S. entry for an international competition for a housing project in Lima Peru, which was to include a site plan, house plans, and a construction system. Chris, Solly Angel, Christie Coffin, Sandy Hirshen and I went down to Lima and lived with families there and observed their daily lives and community activities in order to develop the patterns for this project of 1500 houses. Our entry was a publication, Houses Generated by Patterns. The format of each pattern was Context, Solution, Problem. It was significant in that we were dealing with a different

Figure 3: 'Entrance Transition", "Flowers on the Street;" PREVI, Lima, Peru, 1984.

culture and we proposed a low tech construction system. Inasmuch as we were not one of the three winners, there was controversy on this, and in actual outcome, each entrant in the competition had one cluster of houses built on the site – all constructed of concrete block. I visited the project in 1984, and the residents had made additions and modifications to their houses and were very happy and proud of their home and neighborhood.

THE OREGON EXPERIMENT

In 1970 we began the Oregon Experiment – a campus planning process in Eugene. Chris, Murray, Denny Abrams, Solly and I traveled often by train to Eugene and met with the Campus Planning Office, University officials, and faculty and staff of various departments to develop patterns and a process by which the campus could grow. The process is published as The Oregon Experiment, which describes six principles as basic to the process – organic order, participation, piecemeal growth, patterns, diagnosis and coordination. The Oregon Experiment continues to be the planning process for campus growth. The Center took on other projects – the Modesto Mental Health Clinic, Office layout for the City of Berkeley, etc.
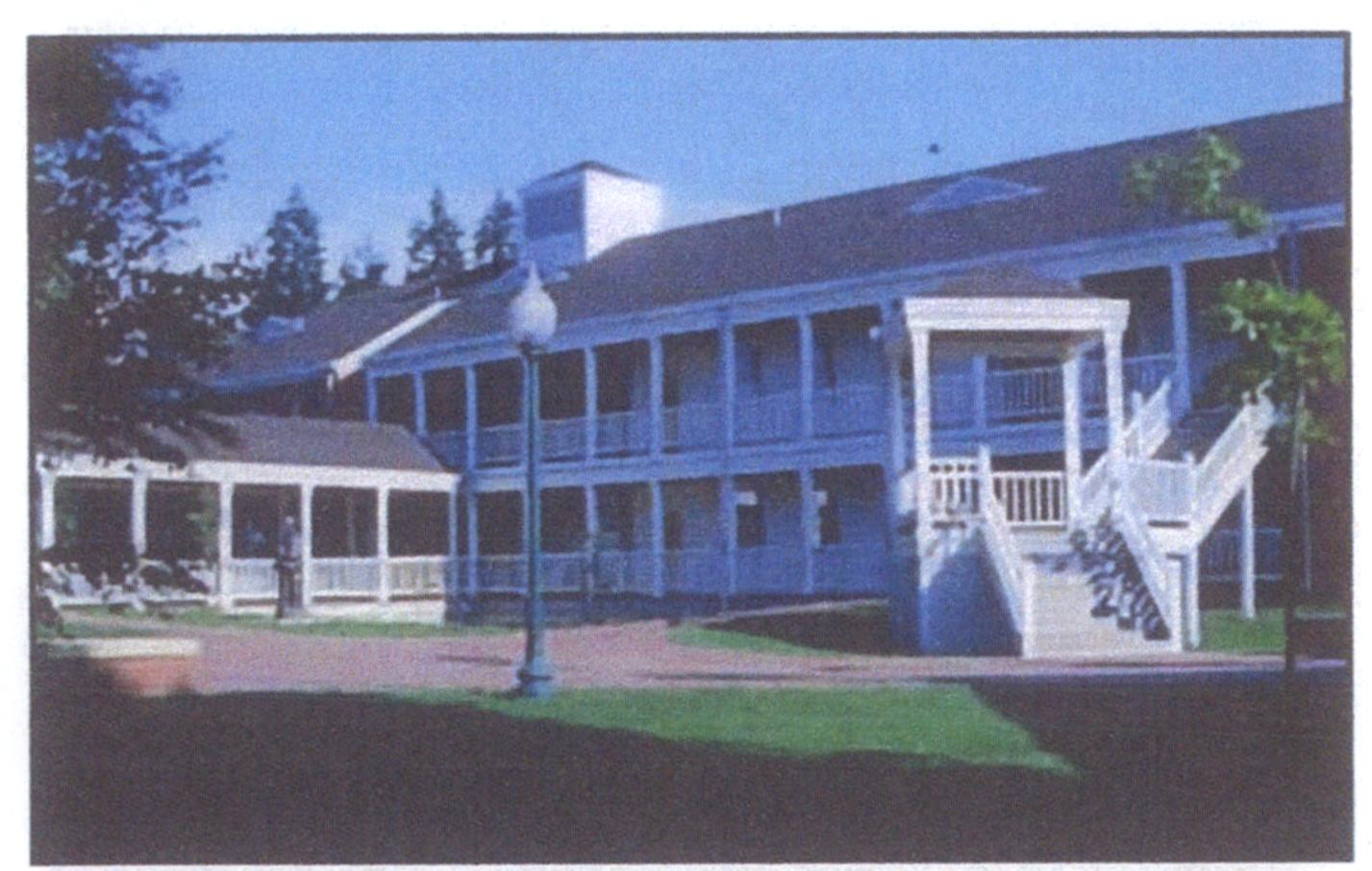

Figure 4: ' Open Stairs", and "Arcades", School of Education, University of Oregon, Eugene.

A PATTERN LANGUAGE

After the Oregon Experiment was finished but before we published it, the concerted effort to produce A Pattern Language began. The patterns from the projects the center worked on so far, modified in their format and content made up the beginnings of the book. We filled in with additional patterns so that the final book was a set of patterns that roughly outlined a sketch morphology of towns, buildings and construction – each pattern was a principal that could easily be improved, over time, because of its transparent argument. The context in terms of climate, locale, etc was often so obvious that one didn't have to always delineate it. Resolving forces or tendencies were the main bases for the problem that would then lead to a solution – a statement and diagram expressing the essential parts of the solution in some essential relation to each other. This diagram or morphology is what makes a pattern – a pattern that repeats over and over again in the environment –city centers, neighborhoods, kitchens, balconies, windows, etc. Each pattern is connected horizontally and vertically to other patterns via its parts to form a language and these connections are stated above and below each pattern. Max Jacobson joined the team to work on the construction patterns and Ingrid King joined to look for the key images and other photos for each pattern. Solly contributed whenever he was in town generally on patterns and especially the diagrams. While all of this was going on, we settled on the size of the book, the weight of the paper and the type face– we wanted it to be compact and light enough for people to easily carry around and we wanted it to be Xeroxable – two pages at a time. Producing this book was a tremendous team effort under Chris' leadership and after working on the introductory material and producing several manuscripts we arrived at a final illustrated manuscript and with a lot of editing and proofing with an Oxford staff person here in Berkeley to help in the end, it was finally published in 1977.

After the Center

After we finished A Pattern Language , I taught full time at Berkeley and started a firm called Community Design Collaborative in Oakland with Ken Simmons, Halim Abdelhalim and John Liu.

TEACHING

While teaching Pattern Language courses I relied a lot on Chris' early articles – such as From a Set of Forces to a Form as the inspirational foundation of a pattern – and A City is Not a Tree for the general structural foundation of a language. The most practical teaching tool was A Pattern Language, and for me The Peru Project because I taught a graduate seminar for many years, called Housing Patterns for Different Cultures. In this seminar which was especially popular among foreign students, students would focus on a particular culture and produce a report that would give a

short history of that culture, describe past and current housing form, develop patterns for housing today using useful principles from the past and present combined with current ecologically sound technologies and use these patterns to sketch out a housing scheme on a real site. This course was inspired by Hassan Fathy, and of course our work in Peru. I also taught an undergraduate seminar called Housing Patterns for Different Subcultures which eventually satisfied the undergraduate American Cultures requirement. I also used the pattern language in design studios.

COMMUNITY DESIGN COLLABORATIVE

On the professional side, our office, Community Design Collaborative took on projects in the community and used patterns in almost all of them. Ken Simmons, who got the Center the Multi Service Center Project was a strong proponent of the Pattern Language, as was Halim Abdelhalim who was a Ph.D. student under Chris and worked at the Center for a while and who started a community design program at the University of Cairo and a CDC office there. John Liu has always had a serious interest in the Pattern Language and now has a position at the National Taiwan University where he often uses the pattern language in his research, teaching and professional practice. We took on projects such as the renovation of a residential hotel for the elderly in Chinatown for which we were awarded an Affordable Housing Competition prize by the State of California, a 10 year plan for DQU, a Native American University near Davis, the Black Repertory Theater in Berkeley, and Public Housing modernization and new construction in the Fillmore in San Francisco. In each of these projects, we did interviews and observations to arrive at patterns, which we then discussed and developed with the various users, and also involved them in the design process.

Figure 5: Community Design Collaborative; Virgus Streets, John Liu, Halim Abdelhalim, Sara Ishikawa, Ken Simmons.

Importance of Patterns

It was wonderful for me that I was able to integrate so completely, my three basic interests – culture, community design, and the pattern language in my academic and professional work. Patterns were very crucial for this integration, and by themselves very important. To me the most important thing about patterns is that they are generic and prototypical – with context problem and solution fully argued so that they can be understood, shared and used for other similar projects and so they can be improved with use, over time. Of course, if patterns are implemented successfully and clearly in projects, one can recognize them as patterns – context problem and solution - without the verbiage – many traditional environments are like that – Jane Jacobs' stoops or the streets with town houses in New York and other communities and cities, or many European or Asian towns and villages, neighborhoods and housing. In modern developments one can clearly see them in projects done by the Center subsequent to the publishing of APL, Fourth Street by Denny Abrams and Rick Milliken, projects by JSW, Howard Davis, Hajo Neis, Don and Jenny Corner, some projects by the New Urbanism group and many other projects. Among the projects we did at CDC, the best example of clearly expressed patterns is the Robert Pitts Public Housing Project in San Francisco Patterns are in fact in all very well designed environments as principles of design. They just need to be expressed clearly so that people can see them, learn from them, and use them, and improve upon them over time.

Figure 6: Robert Pitts Public Housing, San Francisco.

An Afternote: 11/23/09

I just received an email from "Housing Matters" 09.08.14@