Because of my interest in the application of social science knowledge to my architectural design, the environmental design community was interested in my experience. A meeting was arranged for the practicing social scientists Amos Rappoport, Edward Ostrander & John Zeisel to ask me questions about my experience and thoughts. The following is a summary compilation of our discussion during May-June 1978.

A question from the Amos, Ed, and/or John is followed by my answer.

1. Why the interest in the behavioural sciences?

   The overarching reason is that I believe the design for human habitats should, at the minimum, accommodate their intended functional occupancies. And, for me, these functions include the physical and the psychological, and the cultural.

   In the case of housing, as an example, physical functions include the well-known activities that take place at the home place, both in the home interior and its exterior. We have a very articulate literature for these physical functions, such as the sizes of residential furniture and the dimensions of the activity zones.

   I believe my buildings' performance should accommodate the expected behaviours of the people they are intended. Then, I'd like to extend this performance to those I do not know, what I call the unknown user.

   People find their identity through a number of different ways. Of these, as a designer of places, I particularly impressed by the importance of the appearance and configuration of the physical environment. This provides varying symbolic meanings that people associate with things and places. Because identity is so important, clients expect architects to create the character or image of a place, and in the process, to create, or reinforce a sense of identity.

   Architects do this through design – the spatial arrangement of things in spaces that offer a particular range of symbolic choices. But not everybody has the luxury of choice. The more people are able to choose, the easier it is for them to make choices that reinforce, rather than fracture their identity. The fewer choices they have available, the harder it is for them to maintain an identity. To the architect this means that people with reduced ability to choose should be given a wide range of choices, or else they should be given the one exact choice they need to reinforce their sense of self.

   The difficulty, in either case is that we do not know enough about how choice, or the lack of it, really affects the lives of people. Nor do we know much about the symbolic linkages various people make between objects, spaces and meanings. And that is why architects, myself included, have been looking more and more to the social sciences for, if not exact knowledge, then at least a body of agreed understandings.

2. How do you see what the architect does? Who is he accountable to? And where does the social scientist fit in to that work?

   There are four ways that behavioural science and design can interact. First, through sensitising, behavioural science can help us become more aware of the true needs and desires of the people who inhabit our designed environments. Second, by identifying problems, behavioural science can help designers pinpoint the problems that they should solve through design – and spot the ones that can't be solved through physical design. Third, problem solving, for once we have identified the
problem, behavioural science can provide information to help solve it. Fourth, by evaluating our designs, behavioural science can tell us whether our built designs actually work the way we intended them to, whether the users of a building use it the way we thought and if not, why not.

To succeed in this, and if they wish the results of their work to be useful to practicing professionals, social scientists should relate to the architect's three basic accountabilities aesthetic, financial and societal.

Let's start with aesthetics. There are three kinds of aesthetic accountabilities - the architect's personal accountability to himself, his accountability to the aesthetics of his peer group, and his accountability to the aesthetics of those who use his designs. Of these three, the personal one is the most important to the practising architect; peer group accountability is second and user accountability is third.

The architect has four kinds of financial accountability. There is again, his accountability to himself. He is also accountable to the people in his office and the design team. He is accountable to his client and to the user of the building; and again, the personal responsibility is greatest: if he’s not making any money, he is going to stop practicing architecture.

Societal accountability falls into two categories. Those in one group are restrained by institutionalised owner/architect agreements, building codes, and court decisions. The non-institutionalised ones include two very general concerns - the image of the building and the contentment and happiness of the people using it. An architectural argument frequently takes place in academe and the professional press about whether the architect’s mission should confine itself to the present, to the immediate issues and understanding of function and image rather than seeking both visions of the future and an anticipation of new ways of living.

3. This isn't a new concern, is it? It seems as if you have been looking for answers about how people use spaces, about how they actually live in an environment for a long time. Did this start at your architectural school?

I got my architectural training at the Institute of Design (Moholy Nagy’s The New Bauhaus) in Chicago. As a school it was strong on process and weak on product. Design was a process to solve problems.

It was also very much identified that design was an art form – an art form that involved people. Therefore what you did physically had to relate to people. We were encouraged to do our own analysis and research: “You’re doing a school – what’s the educational philosophy? You’re doing a house – what’s the way of living?”

It wasn’t highly structured. It was more to find out if you as a student were identifying issues outside yourself, creating a system, so to speak, remaining consistent with the system you had created and if your design, the product, related back to those things.

So what I got out of the Institute of Design was process.

The next major educational input came when I took a Master's Degree program under Louis Kahn. With Lou Kahn, I really began to understand architecture as art.

I realised the power of architecture. Kahn used to talk about the institutions of man, generally in riddles, and I realised that what he was talking about was that for architecture to be enduring, it had to reinforce the culture of a people. That’s architecture with a capital ‘A’. He believed in the power of intelligence, of mind, and of ideas. He had an extraordinary belief in the power of architecture. I don’t believe architecture solves social problems. Meaning, if one creates the right space and place and you get the right behaviour – that’s what Kahn believed - pure architectural determinism. And that’s when I parted company with Kahn.
For me his reinforced the question of “why architecture?” it’s presumptuous to think that we are doing a singular architecture because we have such a pluralistic society. We don’t have a commonly accepted tradition. We are in the process of a revolution, perhaps the most complex one in history - trying to sort ourselves out both technologically and socially. In this I see myself experimenting - trying to find spatial and aesthetic guidelines for an architecture for the society I live in and understand.

After I started my own practice, back in 1960-61, I discovered that the thing that got me jobs was my insistence that there was a problem to be solved. I used to analyse the problem beyond the scope of what the client said the problems were, to find out what his underlying needs were. Usually he couldn’t articulate them.

Take developers: they want profit, but they don’t talk profit – they talk of getting more units. So you have to find out the characteristics of the site, you have to find out all ingredients that relate to a development’s profitability.

Once I satisfy the developer with what he wants, I open possibilities to achieve my personal goals. I found that by understanding the fundamental spatial qualities that would lead to profit and/or reduce a developer’s risk, I gained my client’s trust and leverage to modify his program to make the architectural forms that I liked. Give the client what he wants and in the process of doing it, you get what you want.

On the other hand, if I don’t satisfy the client, the guy hassles me constantly to change my design for this or that reason and I lose any influence to achieve the things I want.

But be careful. If an architect does not have a deep understanding of a client’s motivation and program, the architect should be careful about the issues he argues with clients and what they say they want.

4. So actually, you were becoming a skilled diagnostician.

Yes – a tiger for professional homework, for accuracy. My office is a very tough place to work – it is very rigorous.

At the beginning of my office I found mismatches between the building’s appearance we thought we were designing and what it looked like when built. As an example, one of the first projects that got built was a private house. During the schematic design I used clay for my study models but and the house went up I was shocked: it didn’t look like the house I had designed. I was working with small models so I had designed the house from above, as if I had done it from a helicopter. I never looked at large details to examine the texture of the building. Consequently, I failed to realize my details were too diagrammatic and not expressive of the built reality.

It was a shock. The way I was thinking, designing and predicting what the constructed building would look like was wrong.

The next shock was when the people moved into the house. During my designing I had forgotten the kind of furniture they had. As a consequence the spaces in no way looked the way I wanted those spaces to look.

So I said, “Next time, I have to design spaces for the kind of furniture the client has and/or likes and may buy.” But the clients are going to change their attitudes, or at least their furniture, and they are going to sell the house and someone else is going to be living in it. My desire is to return to the project after a given number of years and find the aesthetic values similar to what I originally had – and not find that the building had been changed completely by the users.

Don’t get me wrong. I’m not like other architects who do not want the user to ever change my design. I believe I should understand the way my buildings will be used well enough for my designs to accommodate changes the users want to make. I am looking for an ‘architecture’; I am not looking to create a precious singular design that should be protected from change for all time.
This is one reason I am interested in behavioural science. We architects make extraordinary efforts in our work. It seems to me we should have a close identity with the way our designed product will be used so that the effort isn’t wasted.

5. And mismatch is a waste? So what you’re saying is that when you blew it, you were willing to accept that you blew it.

If a person is willing to say “Gee, maybe I blew it,” that person is open to insights. But the person who is too busy proving that he isn’t wrong, never learns.

The kind of buildings that inspired me to become an architect were indigenous buildings – the Navajo buildings, the medieval European towns and their pre-industrial farm buildings, and especially the North African Muslim housing. Because of the capacity of indigenous buildings to change themselves to satisfy the needs of people, these are more appealing to me than architectural monuments. Indigenous architecture has a form vocabulary from specific cultural tradition. The builders don’t even know they are using a specific vocabulary.

And that is what I’ve been trying for so long to get a better handle on – how and why people act on their environment – so I can do a better job of designing that environment.

So in 1966 when I got the appointment to be interviewed for my first major project, I took it upon myself to do a bit of preliminary research. The new town of Reston, Virginia, was under construction and I ended up with a whole housing area to do – it’s master plan and it’s first phase of 250 town houses. Prior to my interview, I went to their sales office to interview the sales people.

6. Unbeknownst to them?

Unbeknownst to them, I went down about three or four days before my interview and I spent about a day and a half, so I became very familiar with their sales approach. I got friendly with some of the sales people, and they told me why they thought they were losing sales. They went back into the units to show me problems, like “There’s a radiator there, there’s a window there, and there’s a door there – where do you put furniture in this room?” So I made myself a list of all the problems perceived by the sales force and when I made my pitch for the job, I had a long list of things that I thought should be done to make the units sell better. And guys were sitting back saying “this guy knows his stuff.” I won the job.

7. That was actually good research, and you were honing this diagnostic strategy and getting pretty clever about selling jobs at the same time.

Reston didn’t have a housing program for the site. I got them to put together a tour of the competition. We went and looked at what they were doing, and then we had a meeting of the sales people, and out of this evolved a program.

During this project I realised for the first time that all the decisions I was making in design were presumptions. This was a mind-blower to me. I hadn’t any real knowledge of how my decisions would affect people; I had no factual back up for the decisions I made. Suddenly, I realised that I was doing this or that because of my aesthetic. And I didn’t know whether my aesthetic matched that of other people. I said to myself, “If there’s no factual back-up, that means we can do anything.” So I created as many different conditions around the site to find out how many people like living facing the road, how many like living back from the road, how many like having their cars parked in front of their house, how many don’t mind walking 200 feet to their cars, how many don’t mind having kids playing right next to them.

8. Did you have any help, or were you just hacking away at this?
I had help from an architect with Levitt – Tony DeVito, another architect, who had insights into the marketing of housing. He pointed out there is no such thing as one market. There are markets, and even though you are talking about a fixed price range – say $230,000 to $270,000 – there is no such thing as one attitude towards housing. Some people love sitting on their porch watching the world go by and some people hate it.

9. **Does that solve the problem or create the problem?**

It creates the problem. First of all, what you must understand is that the decision process that we learn has an implicit aesthetic, and that that aesthetic is being superimposed most of the time we are making decisions – and we are unaware of it.

The next thing to realise is that by understanding that, you can make different kinds of aesthetic decisions. That means I can do one thing here and another thing there and not be considered a bad architect.

Assuming you have the power to make all those decisions, how are you going to get the building to last? How are you going to get people to respect it and maintain it? This is one of the reasons I think we need case studies, because architects rarely go back and find out what happened after their project is completed.

10. **Are you saying that if the building doesn't change, that is a mark of success; that it is so in tune with the culture and values of the users that they didn't have to touch it?**

No, I think it depends on the different kinds of architecture – the relative degrees of adaptability that we should be able to build into housing, various degrees of tolerance that we should be able to build in. I think you have a different tradition of adaptability in upper income houses than you have in lower income houses. There is actually a more predictable tradition for rich people to follow than that for poor people to follow. So you can afford to be more restrictive in your design decisions in the physical environment for the rich than you can for the poor.

Sure you can. It’s even been done internationally…but not at the scale at which the architect works.

There’s a lot known about behaviour at the largest scales – city, community, for example – and a lot known about the smallest scale – the individual, the object. But there isn’t a lot known at the building scale about the scale of the room, the house, the site. And that’s because being poor means you having fewer choices. We don’t have any solid knowledge about the preferences or choices of lower income people simply because they don’t get much of a chance to choose. Middle and upper income people can choose, and they make their preferences very clear through the choices they make about where they live, how they live, how they dress. They’re well represented in the market place; lower income people aren’t.

So while I know what things to provide for middle and upper income people, I don’t know what kinds of things I should build into a project for lower income people. Adaptability is important - but what kind? Is it important to have adaptability in the kitchen, which is tough, or to change bedrooms around, or to provide variety in the site planning? We don’t know. All we know is that there should be adaptability.

With the exception of Oscar Lewis (*La Vida* and the *Children of Sanchez*) and a few others, our social sciences have not studied the behavioural patterns of low-income people.

11. **Is there a limit to how much adaptation is appropriate?**

My own aesthetic has changed so rapidly that now I prefer to see my buildings modified, taken over by people. I have problems when people say “No, that’s the way the architect left it, don’t change it”. There should be an overall discipline – a form
discipline, a space discipline - that an architect leaves. I would like to come back and find that discipline unviolated, although the particulars – colours, etc – may have changed.

If you have a very strong formal façade and you find people pasting paper all over the windows, you don’t come back and find discipline has been pretty well violated. You say “Wow, I blew that one”, because the windows are facing due west, or something, and the people just can’t stand the glare.

The next major project after Reston was a project called Spring Pond; it went into construction around 1969. At that point I was very big on standardisation, very aware of the limited number of design decisions you can make in mass housing, and aware of the rising costs and the resulting pressures from developers for greater and greater efficiency, and at the same time to allow the greatest amount of flexibility to create different environments. In Spring Pond I standardised the units and the buildings while trying to create as much diversity as possible so the people wouldn’t feel bored. From one extreme, if you let people have what they want, you want as much diversity as possible and as little standardisation because every person is different from every other person. At the other extreme, the builder only wants to do one for everybody. It costs less.

12. So you are always changing things around, depending on the client’s requirements and his stance on this position. Is that true? Different clients will be more tolerant on standardisation and diversity.

Oh, I’m not hired for standard housing. The only time I’m hired is when a client has a problem that can’t be solved by the standard architectural practice in housing.

13. So your reputation is growing as a troubleshooter?

Yes, which is good and bad. It limits the amount of work, but on the other hand, I tend to get interesting work.

I also feel that since I get fairly specific kinds of work, I am responsible to do something that is beneficial to the profession at large. Something ought to be coming out of all this, because when you get special problems you get special opportunities.

14. So not only is each building or project a test in the sense that Reston or Spring Pond was a test, but it is a test in the sense of adding to the body of architectural knowledge. So how would you define research in this context? Reston was a research effort; Spring Pond was a research effort. What’s the chief characteristic of this sort of research?

You have to have a problem without a solution. You have to have expectancy for a solution that is going to perform in a certain way. And then you have to go about finding the relevant data in order to redefine the problem. That's part of it: the problem is usually stated the wrong way – maybe that's why you don’t have a solution. Or maybe there are data from other areas that has to be brought into it and transformed to fit the problem.

The difficulty for us architects is that nobody is making translations of that data in terms of how we operate as architects.

Here’s a simple example. I’ve learned that if you are faced with a project that is going to have weak management – management that can’t select tenants well, or that doesn’t deal well with people, or that doesn’t follow through on maintenance and repairs – it is going to be torn apart. To the degree that I can begin to predict strong or weak management I must make decisions in design – deciding that the quality construction is more important than the amount of space, for instance.

15. So you are compensating for their shortcomings.
Absolutely must, otherwise the thing will be ripped apart.

16. You don’t talk about this with developers?

No, I try to find out what the patterns are. We know that certain kinds of housing have certain patterns of management. It hasn’t been documented, but I think there is a correlation. It has to be translated though, to help the architect know how best to use the budget he has been given for the project. It has to be linked specifically one-on-one for the profession to pick it up. When I talk management to most architects, they don’t understand why I, as an architect, am talking about the management of a housing development.

17. Are there other dimensions?

The sequencing of the trades, along with the particular labour unions in a city, have a pretty powerful effect on the kind of architecture you produce. And the way money is allocated to the job – the cash flow – can affect the quality of design: you need to have money when you need it. Management knows this. But its not taught to architects. If I negotiate a bad fee, I’m strapped and I can’t do the work that’s needed.

Then there are things like the cultural values I’ve been talking about, the implied form instincts that people have. Very few architects talk about that, but cultural anthropologists do. I want to find out how these indigenous forms develop, how they are linked to the people’s values.

I found out that there are all kinds of groups, not just rich and poor, or even poor and poor. There are black rural poor – big differences; there are island blacks, who are different from non-island blacks. You name it. There are so many subgroups. And they are culturally trained to behave differently and to perceive spaces differently. And the big question for me was “Who knows about all this? Who’s got the answers?”

18. It sounds as if some of these factors that influence design are major ones and some are small ones, as if perhaps cultural differences may be fifteen percent of the whole, or maybe three percent. Maybe one reason most architects don’t get all wrapped up in cultural differences is that the other big hunks are so monumental.

But the big hunks should be solved immediately. The financial problems, the technical problems – architects should have those taken care of in a snap. We have a tool kit to take care of those things.

19. So one of the reasons architects don’t get into these cultural nuances is that they are so busy dealing with things that they should be able to handle quite easily.

Also architects have been increasingly technologically minded over the past century. They think they can really solve things by making a better widget. How many times have you heard somebody say that if only there were a better structural system, we could solve low cost housing? I don’t think the solution for housing lies in technology let alone architecture. I believe it lies in understanding our urban social problems and implementing effective social and economic assistance to disadvantaged people; I mean those people not within the effective housing market.

20. You were closing in on this understanding of social values, then, growing more aware that there were answers that you didn’t have but that you needed. Did you know where to find them?

Not exactly. We had a project in New Haven – actually two companion projects at about the same time – in which I became quite aware that what I was designing wasn’t going to match the way the potential users lived. And I was so frustrated about not knowing what to do or where to find the answers that I structured questions and observations for my staff to do the survey people.
A small sample were interviewed – six families – about the way they used the rooms and spaces in the housing they were living in, and about the way they would prefer to have rooms arranged. We used simple floor plans and cardboard cutouts to make interviewing easy. What we learned from these six families was that the design program we had wasn’t going to work for them. They wanted the kitchen where we had located the living room and a number of other things that were the opposite of what the original program called for. I took this information and redesigned the first of these two projects: the same information was a strong influence on the design of the second groups of houses.

21. **Why did they want kitchens where the programmers had thought the living rooms should be?**

   Certain groups of people in urban areas seem to want the kitchen in front in order to have privacy for their living room at the rear of the house overlooking a yard. It’s a typical townhouse arrangement. I don’t know if there is any correlation with income or ethnic group. There are other groups who maintain a different pattern, setting aside the living room as formal space and preferring a large kitchen/dining area as a centre for family activities. The people who were going to be living in the New Haven fit this second pattern.

   We found this out not so much by what they said, although they did say they wanted the kitchen in the rear overlooking the back yard, but from the patterns that we saw in the houses in which they were living when we interviewed them. The best furniture was in the living room; if we interviewed them there, they were more formal, more distant; the kitchen was more comfortable and they were more casual. From all this we inferred that they viewed the living room as a buffer, a place for dealing formally with people, while the kitchen was the centre of activity, a place for people who were, or could be, part of the family.

   People are very adept at manipulating their environments themselves to reinforce the symbols that tell them who they are and who you ought to be. But they don’t talk about it in any explicit way. The physical environment certainly communicates their values, however that communication reinforces some people, mystifies others.

   We then studied how we were going to get people into the park, which would be the different groups of people; then we designed specific routes for these populations to use, with areas that were sort of “their turf” and areas where they could mix.

22. **Did the client recognise the potential problem?**

   No. Although the client of record is the city, it always boils down to who makes the decisions. And the city listens to a young frustrated architect who believes that if you make something beautiful like a park, all beautiful things will happen. So I couldn’t get the program to attract the people to also solve the problem.

   But I was able to use John’s data to change things somewhat, by subtly threatening to publish his analysis if the city wouldn’t let me redesign the park. I never had to say it that strongly, of course. What I wanted to do was to redo the circulation system, without any increase of fee, to make the park better. In the long run, I generally got what I wanted.

   The same thing happened in New Haven too. The sociological data was perhaps more useful as a political tool than as a design tool. With institutional clients, the architect is really up against the wall. I’d rather work for somebody who is after profit, because he can link it to something – a larger issue.

23. **So the Cincinnati project was your first real architect/social scientist collaboration?**

   It wasn’t a big one but it was the first one, yes.
24. What were the pros and cons?

It worked very well. I was surprised at the speed with which John redefined the problem. And I was very impressed with the way he could link that to the design devices that could also solve some of the problems. On the other hand, I was surprised that he was not using, as far as I could tell, a body of knowledge.

25. Like an architect, was he relying on his perpectivity?

Yes, and it struck me toward the end that I was just using his aesthetic. And that wasn’t what I was looking for. I thought there was going to be a process of drawing on this report and that literature, something with back up in black and white. So that was one of my first suspicions that the behavioural scientists may not be much different from us architects.

26. Except that they are tuned in a different direction.

But I was still convinced that there really was something solid out there somewhere in the social sciences. All I had to do was find it.

And then throughout the early 70s I started attending many of the architectural research meetings. I was on the American Institute of Architects research committee and I was part of RAP – Research Advisory Panel – and through both of these activities ad others I was meeting a number of people who were active in the linking of the behavioural sciences to architecture.

And I began to get a feeling that there was something funny about the whole thing. At the time of the Coolfront conference, I was passionately arguing that we architects had been doing things wrong, and that the behavioural scientists were the ones who really knew what was what; we ought to be listening to them, using them. I was a great front guy.

There were three or four social scientists at the conference, and three or four architects. On the social science side, John (Zeisel) was the closest to being an architect; on the architect side, I was closest to the social sciences. And I thought that the model that was produced was a disaster.

27. At the time, I was very impressed. I didn’t know enough about the design process to know that there were a given number of steps, and I was impressed to see so many places at which a social scientist could make an input.

Well, that’s true. But as a working model of how design happens, I couldn’t accept it. The linearity of it was what I resented.

But I certainly gained a tremendous exposure and education from the process. My mind was stretched in ways that it hadn’t been stretched before. I had to deal with issues that I had never been able to deal with because I had never had the right people to deal with them.

And following some of these ideas to their logical conclusions, I began to realise that I was splitting with what I considered “orthodoxy” in the man-environment discipline. I think that came when I realised that when I was telling the social scientists “If you really want to do something, see what the architect feels accountable and start addressing those issues, because those are the open doors. That sort of passed over everybody and I realised that my insight – what I believe – is really a minority insight. What I really kept on testing, in project after project, was my belief in my own insight. And then I began to wonder just where that mysterious discipline I had been searching for really was.

I was asking myself questions like “What do architects really do? What do social scientists really do? And what are some of those open doors that can be used?"
28. It seems to me that nobody wants to back up hard and ask, “Am I a fraud, or do I have some profound insights?” I can think of times when I was assigned some answers to produce, and I had experts at my fingertips, and we couldn’t produce answers. Orchard Mews, on which I worked with you, is a good example of that kind of frustration.

Okay, let’s talk about Orchard Mews. It’s a low-income housing project in Baltimore and one of the major things there is the way I am distributing buildings and pathways and play areas on the site. I was down to the construction documents when I realised I was facing my last chance to change anything and I hadn’t brought in any of these behavioural scientists. I was running on my intuitions again. So I called you, and I called a consultant in Baltimore who had done surveys on how children play – a very sophisticated planner, and a woman from New York who had done research on children and how they play. We spent three or more hours at it. I would ask specific questions and all I would get back were arguments and opinions. The more they argued, the more convinced I was that nobody really knew the answers, and that I could do whatever I wanted.

That was disappointing of course, since I’d been looking for specific answer, but there was another more positive side to it. Realising that the questions I had been asking had not been answered meant that I had every right to organise the way I wanted to do it and to test it the way I wanted to test it, because nobody else had anything better.

29. There were about seven pieces of ground on the site and the problem had to do with where the kids were going to play and what you would put there for them to play on. The upshot of it was that one expert had done one study and had a lot of expertise in a very narrow area, and the other expert was an expert in some other very narrow area, and they couldn’t generalise.

You would keep saying that you had to come up with a program by the end of the day, and then you would say “Here’s an area: do we put down concrete, or asphalt or what? Tell me. I don’t want to hear anything but an answer, because I’m going to write it down and go on to the next one.” It was pretty funny, because I was feeling like an architect, trying to get answers out of researchers. The grim fact was that our experts weren’t that expert. They were as expert as could be found, perhaps, but whether the large body of knowledge doesn’t exist, as you said, or else their individual areas of expertise were so narrow they couldn’t generalise.

Or maybe the knowledge that exists hadn’t been packaged.

At any rate, the largest collaboration came about as part of a planning study for an entire community. I negotiated a planning contract that included good money for a variety of consultants, and I commissioned a social scientist to do a large chunk of work. I wanted to find out about the social structure of the community and how various actions that might be recommended in a renewal plan might affect that social structure. Would they strengthen it? Disrupt it?

I also knew that if the information – the social information – were not linked to economics, I would have nothing because sooner or later somebody pays the bill. I wanted to be able to give solid sociological answers when somebody threatened to cut something out of the plan to reduce costs. If I couldn’t give solid well-documented answers, the money would disappear, and then the plan would disappear and I would lose control of how the money would be spent.

So I needed fairly hard reasons linking the various aspects of the plan. One such linkage could be from a social situation to a particular kind of behaviour to a required level of maintenance costs. And I already had some experience with an economist, which showed me everything an economist does is based on social values – only they never admit it. Their work is based on how they think people are going to respond.
under certain conditions, which to me is anthropology and sociology – based on economics.

I decided that what I needed was a sharp social scientist who could read through the inferential value judgements the economist might make to spot the times when he (the economist) might make the wrong value judgement. I found, however, that it was impossible to get the social scientist to link with economics. Impossible. The social scientist was willing to understand what I was talking about on a verbal level, but completely unwilling to do anything to change the process he was accustomed to in order to make the necessary linkages.

I also found that the social scientist was extraordinarily good at the quick hit – at the reconnoitring level.

That’s where he came out with probably his most brilliant work on this project. But when it came to the solid data, things didn’t go so well. I didn’t need intuitions; I needed scientifically proven reasons behind the figures on the social structure. When it came to that, it was a flunk. I got a pile of stuff that very few people read, with no direct relevancy to planning decisions or economics.

30. You received what? Computer prints out? Were you able to read it, or weren’t you?

Yes, I received a computer print out. No, I couldn’t read it and I felt I didn’t have time to learn. We just didn’t have time to begin to read it. We were up against a short deadline for a report, and the consultant had been running behind schedule. If we had had more time, more money, we could have gotten through the process the way the consultant wanted, but we didn’t. We needed a product, a report, some answers, and we needed them on time.

I also have the feeling that no matter how much time I might have spent, it wouldn’t have helped. The problem was larger than I had originally thought. The questions the consultant was asking showed a considerable gap between his understanding of the project and my needs. I didn’t have the time, nor should I have had to take the time, to give him a basic education in planning. So the question became: do we scrap all the time and money that we’ve spent? No, we don’t: so we put the responsibility on the consultant to finish the job and deliver. That made him a little frantic and as a result I got more information than I could handle, and it wasn’t the information I needed for the project.

The irony is that this is not a dumb person. And this particular social scientist feels very cut up about the whole thing himself; he feels equally mistreated. It’s a two way street. What I guess happened is two bright people got together and it just didn’t work. Does that mean that it takes geniuses?

Then I realised that I don’t know the processes of the social scientist well enough to have intervened at the right time. I let too many things go by, by not knowing when to intervene. I don’t have that problem with engineers. I know enough to tell a mechanical engineer that he doesn’t have to do a specific calculation because the heat load won’t be calculated that way. But I don’t know how to intervene in the social scientist’s process, which means I am totally dependent on him and his intuitions. And the social scientist, in turn, has a few clues about how planners or architects make decisions.

31. You never asked him about the methods he used? Maybe you should have been suspicious about his first quick performance. How did you choose this consultant, anyway?

It’s a lot like the way you used to choose a partner to dance with when you were a kid: who looks good? You go by first impressions. You look for someone who’s interested in the same problems you are. Who is more like me? And from the first experience
you develop some criteria to use the next time – it's the normal process of learning. I'm not suggesting that I was conned, or hustled; I was just learning by making mistakes.

The social scientist doesn't literally know step-by-step how we are making decisions. Which means that the social scientist doesn't know how we're going to use his information.

So there I was, almost in the final stages of planning, and I still needed the data. I still needed a link between economics and the social effects of the plan. I knew I wasn't going to get a social scientist and an economist working together.

32. Come on. They do it all the time in market research organizations.

Maybe so, but it hasn't been normal in my experience working with developers. Of the eight to ten market analysts I've dealt with, not one used a "social scientist" as part of the team.

My choice was between a social scientist that knows economics well enough to put everything together, or an economist who knows enough sociology to put it all together. I couldn't find a sociologist who knew market analysis, but I did find an economist with planning experience and social perceptions. I gave him the whole bundle – the responsibility to come up with the market analysis, the economics, and to say what the social consequences might be – to spell out the characteristics of the users, and the changes in the users. And that turned out pretty well.

I learned something from the whole experience. The problem was that we – a bright planner/architect and a bright sociologist – didn't know how to work with one another. That meant that there is another problem that I never before realised: forget whether you have the information or not, if you don't understand how the other fellow is working, you can't use his information.

The other thing I found out – something else I should have realised, perhaps – is that what you social scientists say you do, is not in fact what you do. There is a major gap.

33. Aren't you generalising just a bit too much from your own experience? Social scientists don't write about their work in the same way they do it, but what makes you say they don't talk the same way they work?

They're no different than architects in that regard, of course. But how many times do you have to burn your hand on a stove to realise that it's hot? There are some lessons you learn fast.

There are two sides to it. On one side, there's the social scientist that says, "You asked for this, and that's what I gave you." On the other side, I'm saying, "No, that's not what I asked for. I said this was a problem, and I thought that you knew enough to know whatever you had to do about the problem."

So whatever you're dangling out there in the marketplace, or whatever we architects think you are dangling – is not what you are dangling.

Also, what we architects are asking you for is not what you think. It's a two-way street. We're not talking about frauds, just two sides of a situation.

The particular individual you go to makes an incredible difference. And since there is not a common currency, the next time I have a good amount of money to spend on a behavioural consultant, I'm going to put him through a stiff review process. I'm not going to pick a particular consultant simply because we met at a convention and the chemistry is right; I'm not going to take the rest for granted.

34. So it is really a performance-oriented operation?
Yes, but in order to interview a consultant, you have to know something about what he does.

35. How would you go about choosing one?

It’s no different than choosing any other consultant. We get put off a bit by the aura that surrounds the word “scientist”, but there are social scientists who know their stuff and some who don’t; some that you like working with, and some that you don’t.

Basically though, I would want to know about the consultant’s experience and knowledge. But before you get into that, you need to know what your own problem is. If, for example, I wanted to do a post-occupancy evaluation of housing for the elderly, I would first eliminate anybody with no experience of the elderly, and then eliminate those who had never done a post-occupancy study. That would give me a fairly limited list of people from whom to solicit proposals. I would review those with a close eye to their understanding of the time and budget constraints that we would have to work under.

There are some other key considerations. One is whether the consultant is more interested in my problems or his. I would prefer that the consultant be more interested in mine. A lot of these people who want to get involved with architects get confused about why we’re paying them. We think we’re hiring them to solve a problem for us; they’re busy trying to learn from us. Sometimes I get the feeling that to the researcher, everything is research. But as architects, we are trying to make a living by using out time to solve other people’s problems; we don’t have the time or the money to pay consultants to learn from us.

Another key consideration is whether the consultant can question the questions I ask him. Can he tell me that what I’m asking for can’t be done under the budget I’ve set, but that for some other amount of time or money he can do something that will better meet my needs? Or does he just promise to give me exactly what I want, even if he knows it won’t do the job? That sort of critical rigor is important.

And, of course, I would check references.

Another thing I found out: architects and planners have been doing research all along, only we don’t call it research. And people who live by research do not identify the way we have been doing it as research. But we have been identifying problems; we have been doing it systematically; we have been going out and looking at other things. But we don’t deal with what we find out statistically. That is probably the single, most important thing that we do not do to gain credibility – not deal statistically with our analysis.

36. I think the problem is that to the social scientists, what you as architects learn from an individual project has to be generalisable to other projects, or it isn’t science. But if every case is unique, where is the body of knowledge that you use next time? But because some researchers don’t bring a disciplined framework to the task, each case is unique. I would suppose that is the point at which the traditional researcher would attack the architect: not producing a body of knowledge that is generalisable.

I don’t think we’re going to get a breakthrough in this attempt to link things together from the social scientists. I think it will have to come from the architects. We have to identify very specifically those problems we think other disciplines should address. We have to show the social scientists the linkages they don’t understand, the ones they are not sensitised to. I think those are the two keys things.

37. It isn’t only the statistical treatment of data that is a difference. That’s actually secondary. It is the way data are collected that is most critical. The random selection of subjects, the validation and construction of questionnaires, all the tools of data collection are the most critical (?) difference between the way a social scientist and an architect get their information. Without these tools it is not possible
to use statistical analysis. It would seem that the architect's greatest area of ignorance is in the way data is collected. Learning these tools would go a long way toward helping you pick a social scientist.

Right. And if we architects want the information that we develop and generalise to be accepted by social scientists it will have to be guided by some sort of discipline accepted by social scientists. But there is enough discipline in one architect's generalisations to let them be used by other architects. I know what another architect has had to do to get the information.

I think the problem is that social scientists believe that what architects learn from an individual project should be generalisable to other projects, or it isn't science. But if every case is unique, where is the body of knowledge that you use next time? But because some researchers don't bring a disciplined framework to the task, each case is unique. I would suppose that is the point at which the traditional researcher would attack the architect: not producing a body of knowledge that is generalisable. Each case may be unique, but only when that uniqueness is properly stated can it be tested or measured.

Maybe it’s the measurement that causes the problem. Few clients have the money to build a project just to test one narrow measurable theory. Architects have to design projects to meet a wide variety of needs with a wide range of variables within one project. Don’t tell me that social science can’t give me any usable knowledge because architectural projects involve a lot of variables. I guess I’m challenging the social scientists to figure out a way to do the measuring.

But I don’t think we’re going to get a breakthrough in this attempt to link things together from the social scientists. I think it will have to come from the architects. We have to identify very specifically those problems we think other disciplines should address. We have to show the social scientists the linkages they don’t understand, the ones they are not sensitised to. I think those are the two key things.

I feel the architects should do it because we understand our own work better. The other way around – if we expect the social scientist to do it – it means the social scientist has to become an architect. The thing I see coming from the social scientist is the challenge that puts the responsibility on the architect. That’s the thing that I am very impressed with: that the social scientists challenge the assumptions on which we base our work. And we – the architects – have to pick up that challenge to make the linkages. And to say, “All right, here’s what you think you said as a challenge, but look, this is how it really works, and these are the assumptions. Now, do you have something better to put in its place?”

38. Another part of the problem is that you architects aren’t calling all the shots. Somebody else is – the developer, perhaps – and we behavioural scientists sit back naively and think that the architect is making all the decisions.

Obviously, we need some kind of a structure that explains what we’re doing. And the whole man-environment area is so deterministic now, assuming that every time you build something you are affecting the fate of mankind. That’s not true of course, and I would expect that the proof that it’s not true would start coming from the behavioural scientists and not from us. You can help us by showing us entire areas in which what we do physically doesn’t change people’s behaviour.

39. But don’t most social scientists recognise that architecture is not the prime determinator of human behaviour? Some of them may be afraid to tell the architect that. But it is really management that is the prime determiner of behaviour in a building where there is a management system. Some architects seem to have a difficult time accepting that idea. They claim they were not trained to deal with management or management problems.
But it’s not just management. I would say that the prime determiner would be the values that we carry around in our heads. From those values, you get management, and from those values, you get people’s responses. And it’s those values that I want to learn about.

40. But if I do a study that shows that it doesn’t matter, that’s nowhere near as impressive as a study that shows that it does matter.

But if it doesn’t matter, you are closer to what does matter. And if you can show what doesn’t matter, the things that do matter gain in importance.

41. You’re definitely right that the researcher really has no clue to the intricacies of architecture. And it’s pretty intricate – the orchestration of money, regulations, clients.

Yes, but we’re being used less and less. There’s only a small percentage of construction that is done with benefit of architects. A lot of what is being done involves design skills but not architecture per se. People discover that they can hire specialists who are better at predicting the results of their design work than we architects are. And I happen to think they are right. I think design professions have not gained the skills that are necessary for providing people with the things they are looking for. And that’s why we are not used. There’s no mystery about it.

42. Can you elaborate on the kinds of people hired to take the place of architects?

Architects say that they provide a service for an owner. That has been the traditional architect-client relationship. But clients are demanding more and different services than architects have been prepared to give. Financial management is taking on greater and greater importance and the profession has trained architects for the opposite.

As clients demand better control of money and time they turn to others who can give them that control. Real estate developers, who have land or capital to develop, businesses, retailers – everybody wants the building up on time and within budget. Package builders can promise delivery by a certain date at a given price. Home builders, interior designers, mobile home manufacturers – all of these are producing buildings that architects don’t have anything to do with.

I would like to link the whole man-environment area with economics. If I were to go back to school, I’d like to take a doctorate in anthropology, one in economics, and one in urban geography. I’d really have something then.

43. You don’t need a Ph.D. in anthropology. You already are using anthropology in the kind of data you do collect. You need a quantified science.

I’d go so far as to say I’m already a social scientist. But I would question the statement that I need a “quantified science”

We’re back to measurement again. There are other ways to measure that are as good as what is traditionally meant by “quantified science”. And those are the only ways we architects have to measure the things we need to know. I guess I feel the social scientists should help us find more rational ways top measure, but I don’t accept that their ways are the only ways.

44. So you feel that a lot of these things have to be in one person – that collaboration can only go so far? Is it easier for the architect to learn what he doesn’t now know than it is for the social scientist to study architecture?

I think that there are architects that lean toward the social sciences and the way they are going to learn more about them; and that there are social scientists that are interested in finding out more about the design professions. I’m not saying that kind
of thing should stop; not at all. I’m looking at the whole architectural profession and the whole social science profession and speculating on where the action is. I don’t think the major breakthrough, or the new discipline, is going to come from social scientists learning about architecture. I think it will be very helpful for those who do, but that isn’t where I see the breakthrough. I look for it to happen through the architects.

45. You’re right. It must come through the architects, not social scientists. That means that the architect must learn as much about social sciences as he now does about engineering – at the very least.

I agree, except that if all things were equal, I would put the social scientist up there with the statistical structural analyst.

We’re just beginning to recognise that the problem we’re faced with is to put human needs and hard, quantifiable engineering data together with economics in order to demonstrate to clients all the cost benefits, the bottom line, for every aspect of a project. If we don’t do this as a profession, we will lose control over the processes that we know work in shaping the physical environment. If we do make the breakthrough, we will be hooked into the magic mystery – the scientific way of dealing with issues, even though there isn’t a truly scientific result.

I’m worried, for instance, about the whole business of post-occupancy evaluation. If somebody decides that there really is a way of finding out ahead of time that the architect is responsible for the way those users are behaving, and if I’m stuck with that in a contract, the law suits are going to come at me thick and fast. So the architects had better know more about it than the social scientists.

46. One big thing is that the architect is legally liable and the researcher never is, at least at the moment. As long as there is that double standard, you’re not going to put your work in the hands of a social scientist.

And as long as the architect is held legally liable for his decisions, he has to be the boss.

And anyway, how much collaboration is there? How many times does an architect call a social scientist and say, “I’ve got a little problem”?

47. That’s true. What do you see as the defining characteristic of a good collaboration? What are some guidelines?

First of all, there has to be mutual respect for each discipline.

48. The discipline, or the people?

The discipline is first. And I think the social scientist has to understand that the architect is really under the gun. Like it or not, the architect is going to make decisions, because he is legally responsible, and responsible for time and dollars.

And I don’t want to change that. But I don’t want someone constantly telling me I’m doing it wrong, that there is a more disciplined process. I’ve got a schedule to keep.

In fact, I don’t even see a process, because I don’t know it well enough. What I see is a point of view. The discipline seems to depend on the degree of predictability, on the number of people for whom a given theory or statement is true. To me the key issues are human issues, but the social sciences seem to be taking their rigor from the hard sciences – chemistry, physics. Does that mean that social scientists can only deal with what can be measured? It seems to me that life is bigger than just what can be measured. The issues the social scientists are chasing aren’t always be solved with their techniques. Those who think the issues are larger are going to have to become activists, rather than waiting for the social scientists.
At any rate, this point of view, or perspective, is something that I don’t have – at least not to the degree I would like. There is a whole side of people’s behaviour that other people are more aware of than I am.

And I think you do your statistical stuff based on instinct and an intuition of what’s right. I found that out. If your instincts are wrong, it doesn’t make any difference in the statistics you have.

49. The point about intuition may be true for phrasing questions for a questionnaire but not for the method of data collection. There is a difference.

I question that. But mutual respect for each discipline is very important.

Another important consideration is that the social science consultant does have an area of expertise that is related one-to-one to the problems you want to solve. Which means that the design professional might have a mismatch – he might have the right questions, but he might be asking the wrong consultant. So it’s up to the social scientist to say, “Wait a minute. I understand what you’re talking about, but I think I’m the wrong guy. I think I can do this and this, for you, but here’s something that just isn’t my thing.” I don’t find that from the social scientists, because I don’t think you know well enough just what it is we’re asking.

And the social scientist must be able to generalise. To the extent that you can’t generalise, to the extent that you can’t jump beyond your data, means that the questions asked by the design professional must be much narrower and sharper – a fast in and out. To the extent that you can generalise, it is possible to have a longer collaboration, dealing with more issues.

But I would look to the intelligence and the discipline of the social scientist to set limits of generalisation.

50. Or generalise with declared cautions.

Yes. As an example, the economist who collaborated on the community renewal plan I talked about earlier did just that. I was trying to get him to increase the amount of commercial space he thought the community could support. I told him I needed another 20,000 square feet of commercial space. He said, “I’m telling you, Lou, the most that I can give you is 83,600 square feet of commercial. On the other hand, you as the planner might say that the economist is being much too conservative and doesn’t understand the full impact of the plan, and add as much commercial space as you want. But I’m not going to give it to you.” That’s beautiful. I’ll take that any day.

51. At least you know the limits of his truths. Just as we have to know the limits of your processes and your decision-making powers. The more we know about how you work, the easier our job would get. I sort of know the questions I ought to ask early. And I know what prints I ought to put up on the wall. So I think the sheer time involved should drop a lot when people understand how to do it.

But how much you pay, I think, is pretty simple. No one wants to be ripped off, to pay for a product that is useless. And when you are given a useless product you don’t want to pay for it. In fact, you resent having spent the time let alone the money, on it. To the extent that a person can come up with useful products, then I would think the hourly rate goes up. Why do some attorneys get $100 an hour? Because in an hour’s time they can make some big decisions; they’re more generally right then wrong.

But in academia you don’t have tests on whether you’re performing well or not. Out in the market place, we have some pretty stiff tests. We have to come up with a product that performs in a certain way, at a certain cost, in a certain amount of time. And to the extent that we do that consistently and well, we get more work.
52. That’s a good point about academia. Would you go so far as to say that no one who hasn’t worked outside academia would be a good person to hire to work with you?

Each world — academia and the market place — has its own standards, some of them explicit, most of them implicit. And its the implicit standards that can cause trouble. I don’t know what the academicians’ implicit standards are unless he tells me and vice versa. Market place standards aren’t necessarily better than academic ones, but they can be very different. And if we’re talking about collaboration on a project for a client, it’s the market place standards that apply.

I have hired behavioural consultants that I expected to automatically understand my implicit standards about pace and timing of work, the type of information I needed and so on. But they didn’t — unless I told them specifically what I wanted from them. I have also had behavioural consultants ask me what questions they should ask, or how they should evaluate the answers. That’s the stuff I expect them to know.

53. The difference between practitioner and academician seems to be the big gap. Intellectually you could come to grips with each other across the disciplines.

But the norms in the academic world are so much at odds with your norms. Practitioners see time as money; academicians don’t necessarily see it that way at all. And maybe that’s as important to understand as anything else in a collaboration. Not only must each party respect the other’s discipline, the other’s intelligence and the other’s work process — but they must respect each other’s time and the value placed on it.

I have another problem right now on a housing project. My client has given me one problem, which is that the people must feel secure. They can’t feel as if they are going to be mugged between their car and their door.

My problem is: where do I go for answers? I remember Bob Bechtel talking once about distances and numbers and that there is a point at which the number of units and the sense of security balance. There’s a point at which people feel isolated and private, and a point at which they begin to feel part of the neighbourhood. And there are distances at which another person’s face can be recognised. I need to know about this because it is the strongest thing that is likely to shape the whole project. But I don’t know where to turn.

After coming up with four or five people I could call, I ran out of ideas. And then I started wondering how I would explain it over the telephone. And all the time I’m faced with the necessity of making decisions right now. So I decided not to call anybody, because I’m making the decisions. I have to come up with a scheme for this client.

So then I pick up the telephone and talk to you and I say that what I would really like is for you to sit down in front of the drawings and tell me what you know about the decisions I’m making.

54. And in that case I know nothing. That’s uncomfortable because you are asking very pointed explicit questions and the odds against my having nice, tight answers are pretty high. I can give you common sense stuff on security, but I don’t have any evidence — I’m back to my intuition again.

That leaves me thinking two things. One is that it would be probably very helpful if there were some sort of cookbook approach to social science data for use by architects. We already have time/space standards, graphic standards and other “cookbooks”, why not the same from the social sciences, discussing principles and illustrating them?
55. Being used to cookbooks is half the problem architects have with social scientists. Architects expect cookbooks, but social science is far from being a cookbook.

And Architecture is a social science. But the architect wants to apply it, not carry out research. And what is a cookbook but the compilation of the experience of a lot of cooks – so that others can apply that knowledge. Architects don’t have time and clients don’t have the money to do behavioural research every time they need to know something about how people might or might not use spaces. We architects need some body of behavioural knowledge upon which to draw, something beyond our own intuitions.

The other thing I keep thinking is that I wish I could find the time or the money to go through a couple of projects and list all the question on which I would have welcomed input form the social sciences. Maybe with that kind of a tool I could start communicating with social scientists.

56. There doesn't seem to be a clearing house that could handle such a list of issues – fund the research and the publication of the results – although there should be.

But then throughout your fifteen years of practice, you have really been setting up experiments. You have done that in each project we have talked about. The problem from our standpoint is that sometimes you build so many experiments into one project that it can't really be studied scientifically.

But the buildings are there and they can be studied to a degree by anybody who wants to spend the money or the time. In fact, any architect who ever did anything has provided us with a potential study.

The difficulty is in knowing exactly what the architect was basing his decisions on at any given point in the design process. We have to find a device that makes it easy for architects to document the decisions they make. We don’t have that device right now. The documentation is in the drawings, but the reasons behind the decisions are lost. What I would like to find is a way to document those decisions that fits in with the flow of work in an architect’s office.

57. Do you document your decisions? (Handwritten: Lou: he might mean: do you document the reasons (process) as well as the decisions?)

Yes, but most people don’t read that document. The documentation is in the drawings. It’s a visual document, not a verbal one, and while it does record the decisions, it doesn’t keep track of how we reached them.

Architects are visual, not verbal, communicators. We look at all the little parts of a project, all the decisions, simultaneously, not sequentially. That works well enough for documenting what was decided, but it isn’t much good for documenting the process. So when we collaborate with social scientists, they’re expecting from us the sort of knowledge about ourselves that is the most difficult for us. And what we expect from them isn’t easy for them either.

58. Is there a finite number of “major” decisions that could be documented?

I think it would take a rare architect to know what was “major”. You just don’t recognise what the major decisions are at the time you make them. And neither do you social scientists: you don’t know what major decisions are when we make them.

59. If we did, we could define the problems better. And if we can define the problems better than we can give you better answers.

To the extent that social scientists start to realise what problems architects have, and to the extent that they are able to use their sensitivity and discipline to solve those specific problems – to that extent, we architects are going to come to you like mad.
60. Do you think you can find that information by working with social scientists?

It’s not natural for architects to work with social scientists; it isn’t demanded by today’s situation. But it happens, and it will continue to happen, because there are singular problems and unique people with their own priorities that must be met, regardless of today’s situation.

As it happens - this collaboration between the two disciplines will involve mistakes. My experience proves that. We set out to solve the wrong problem, or we go after the right problem and come up with the wrong solution. But we learn from those mistakes, so we shouldn’t stop trying. And we should go on trying at many different levels.

We – and I mean architects and social scientists – must guard against hubris. We can take such pride in our own knowledge, our own methods, that we lose sight of the worth of other disciplines. That, however, is no way to collaborate.

What we should do is build on our strengths. We must know and understand what we do and how it is unique, without passing judgement on whether it is the right or wrong way to work compared to someone else’s discipline. And both disciplines should be adding to their knowledge through the research that goes along with our collaboration; and we should make this knowledge more accessible and more applicable.

I think it was Whitehead who said that progress doesn’t come through self-knowledge but through community/institutional knowledge. Progress in the collaboration of architects and social scientists will come from knowledge of each other’s disciplines and goals. And there is at least one goal we have in common - the creation of a better life for the people we serve.

61. What have you gotten from your involvement with social science?

This is difficult for me to answer coherently the cover the many aspects and dimensions of the interrelationships between peoples and their physical environments.

I suppose what most stands is my having learned a heightened sensitivity to the potential relationships... and, I believe I have acquired somewhat of an ability to be tuned in to situations that may require study beyond the physical planning and design disciplines. I guess the process I’ve learned is an intuitive art and not a science.