

DOWN TO EARTH

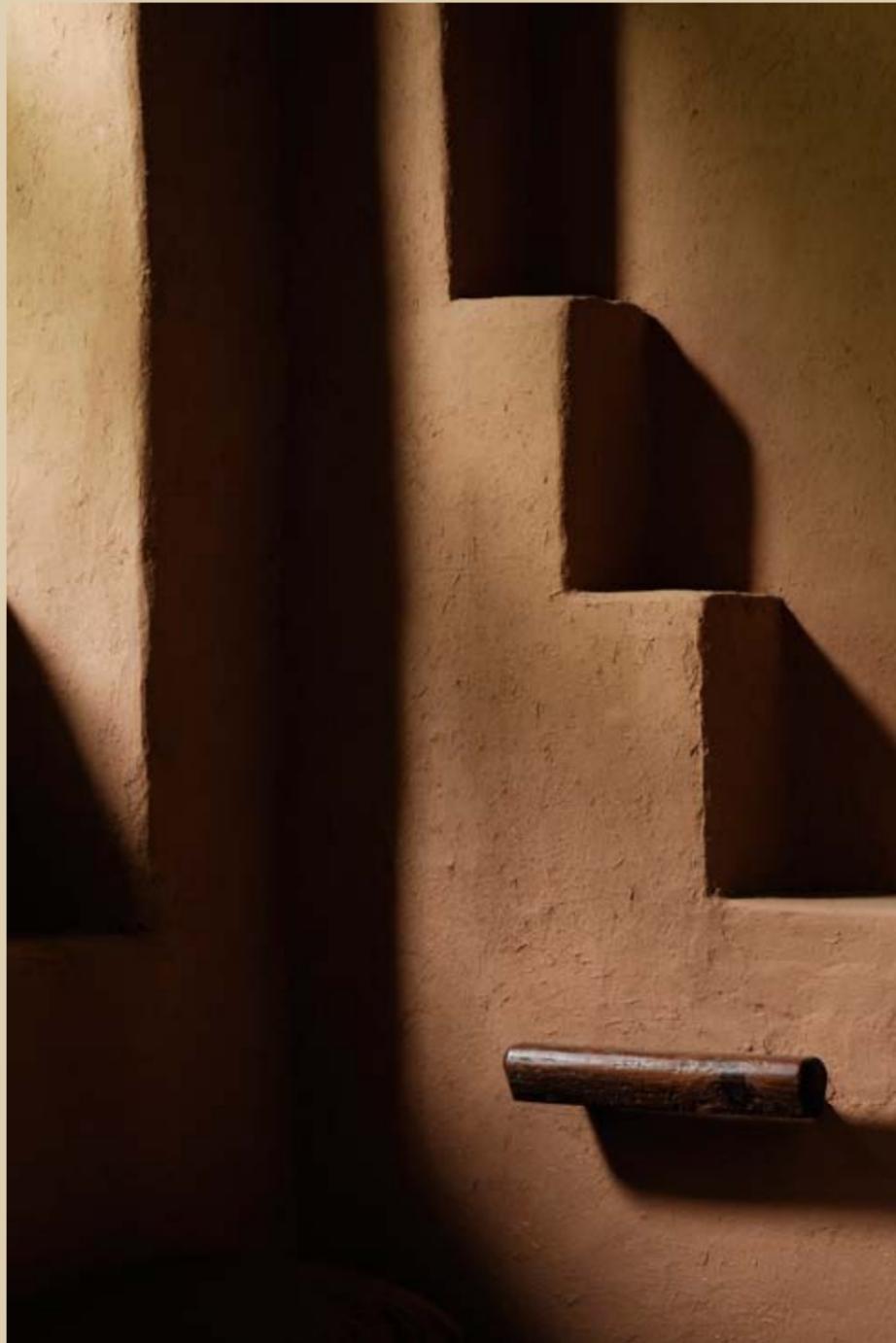
The Mud Architecture of Didi Contractor

A photo-essay by JOGINDER SINGH

“Come to the end of the parking and take the pathway down to the right,” Didi had mentioned. I amble down the path through lush vegetation. The monsoon is on in full swing. A slate roofed building comes in to sight, the roof projecting quite far from the low wall like a large hat. This must have been done to protect the mud wall from the backlash of water running down the roof. The pathway soon gets paved with river-rounded slates and I land up at the door, having instinctively wiped my feet where the paving changed texture. Other buildings in the compound vie for attention, each different in its form yet tied together with the landscape. But for the playful rooflines, I could have been in any Himachal Village. There was a certain designed order in this little hamlet and yet it reminded me of the region’s vernacular.

Didi greets me and we soon get talking. My eye wanders across to the various objects kept in niches set into the walls. The softness and ochre of earthen plaster begins to soothe. A building in sepia the photographer in me says...

Didi Contractor is a self-taught architect based in the Kangra Valley, Himachal since 1978. An artist by training and inclination, Didi always had a penchant for designing built spaces. Her current work utilizes mud from the site to make sun-dried bricks (adobe) and is very concerned with making a minimum



ecological dent. Working with local materials and artisans Didi is very conscious of the carbon footprint of building. She makes every effort to select building materials that consume the lowest possible energy in their production.

“Isn’t a mud house rather temporary in nature?” I’d been asked before I visited her. Tabo monastery in Spiti, Himachal Pradesh, a complex built entirely out of mud has been there for the last one thousand years! Buildings designed with consideration towards climate and site topography when adequately detailed and constructed to exacting standards, shall outlive most casual architecture in any building material. Being based in a seismic zone Didi has also incorporated details to ensure structural safety.

The spaces in Didi’s buildings resonate with a serene silence. A conscious effort at designing the interaction of light in space leads to a celebration of materials. Skylights light up the entrance lobby, a small window is placed where a certain view is required, a slate tile is replaced

with a piece of glass just above the desk washing it with a mellow reading light throughout the day, an opening under the ceiling reveals the tactility of the bamboo used. Windows allow a free movement of air throughout the house even as the form of the roof induces a natural convection.

Any architecture done for a client originates out of a brief. How much of client vs. Didi is there in these projects? Is it really possible to segregate the brief from the outcome? As I moved through these spaces I realized that it was not. Was that because most of her clients were the kind who understood the principles that she was upholding and had, therefore, approached her? Will others understand the relevance of what she was doing with utmost sincerity, relate to the spirit that resonates in the spaces that she has carved out? I asked her...

“What is useful within the architecture will survive. And what is useful isn’t original anyway. It is borrowed. There is very little that is original in my work anyhow. My designs evolve from



the sensibility I have developed from everything I have absorbed. They are like a collage of what’s there.”

This photo-essay is an outcome of exploring several of her buildings to imbibe the essence. Captions have been added to elaborate on the visuals. A conversation with Didi, that follows, fills up the gaps in the visuals.



Above: Walls are constructed out of Adobe (sun dried mud bricks of size 6x12x3 inches) created at site from earth harvested during excavation. Wall thickness is generally 18 inch wide and the wall is plastered in mud that has organic fiber additives to ensure that the plaster does not crack. Pulped waste paper can also be used to provide the fiber.

Left: Landscape features are taken into consideration during the evolution of the design with the latter being fine-tuned in the numerous visits to the site. This leads to a building with spaces organized at various levels inside.



Left: The entrance porch is created with stacked stone with a part of the wall broadened at the base to form a seat. Slate moves up one level and becomes the surface of the seat. Stacked stone masonry is one of the elements of the Himachal vernacular. Didi re-interprets it in her buildings in a designed manner.



Left: Slate, a common building material in the area is used for floors, steps and roofing. Pathways are paved with slates shaped by the near by river. Large river gravel, organized in a pattern at the entrance, forms a natural doormat.

Bottom: Unlike the Himachal vernacular, from where Didi draws her inspiration, spaces in her designs are modern in expression. A large hall is subdivided into key areas with the central fireplace, one that opens up in all directions to distribute the heat and also integrates a smoke-less chullab. Bamboo available locally is smoked and used structurally in a combination of whole and part to create the intermediate roof. Left as is, it creates a beautiful ceiling.



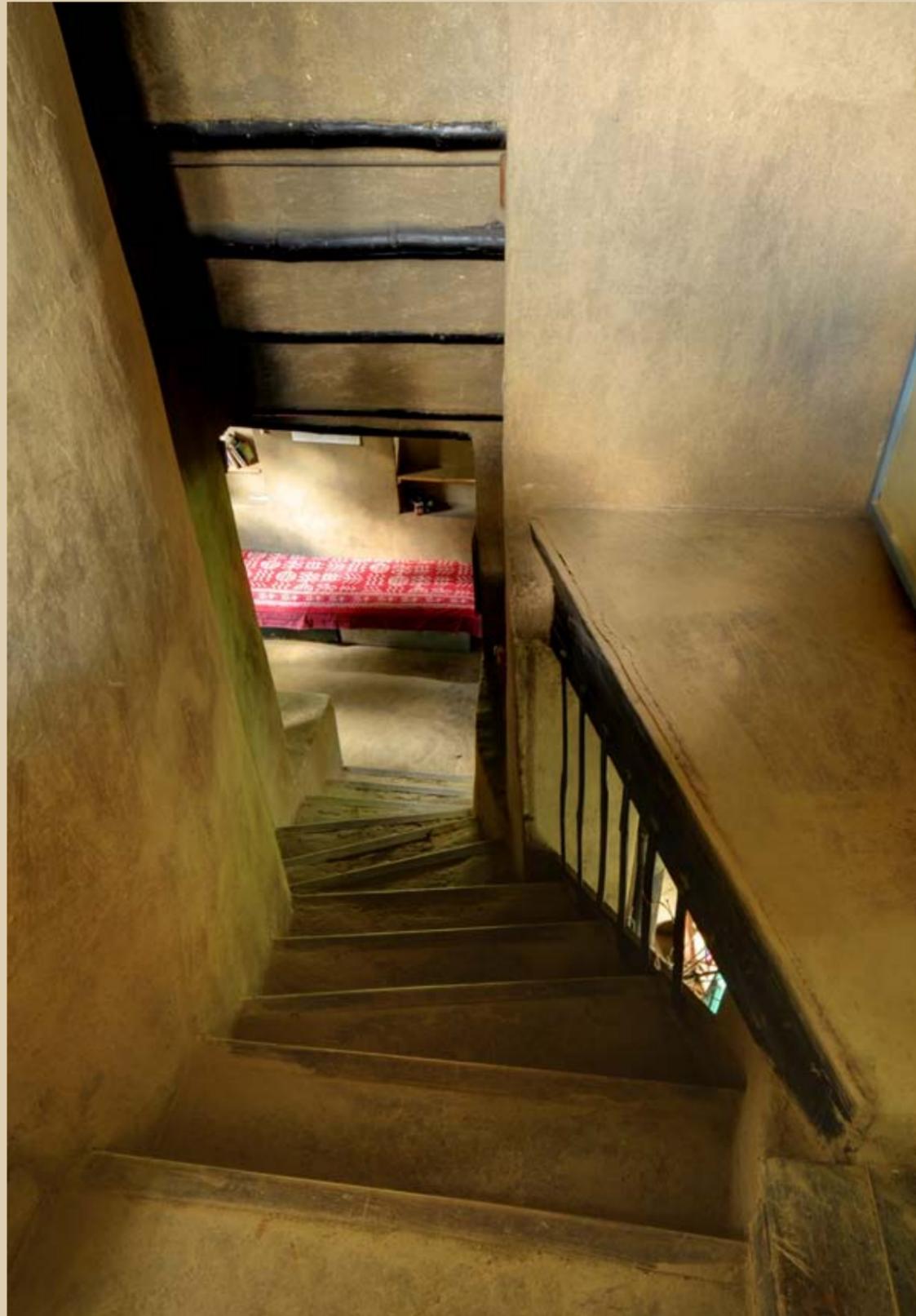


Left: Not believing in false facades, Didi prefers that her buildings evolve out of function. Openings are designed for function rather than decoration. Sometimes light is got in from the sky to highlight a certain space. Changes in the quality of daylight across seasons make the experience of mud-plastered walls dynamic. Light may reveal their texture in sharp relief or a mellow tone. Didi very consciously uses light as an element in her work.

Right: Racks to dry washed utensils are integrated within some kitchen windows. A utilitarian purpose served, transparency is retained, thereby, reinforcing the connection with nature.

Bottom: A living room created with built-in furniture. This is, however, not a standard feature and is completely based on the requirements of the clients. Didi tends to splay the corners of the windows to allow light to spread. Openings are designed keeping in mind the modulation of the wall for practical use and proportion.





Left: Transition from one level to another is treated with the same attention to detail and Didi spends a lot of time designing her staircases. Visual connections are retained and the steps are reinforced with treated timber.

JOGINDER SINGH is an architect by training and a photographer by inclination. He freelances as the latter specializing in architectural photography.

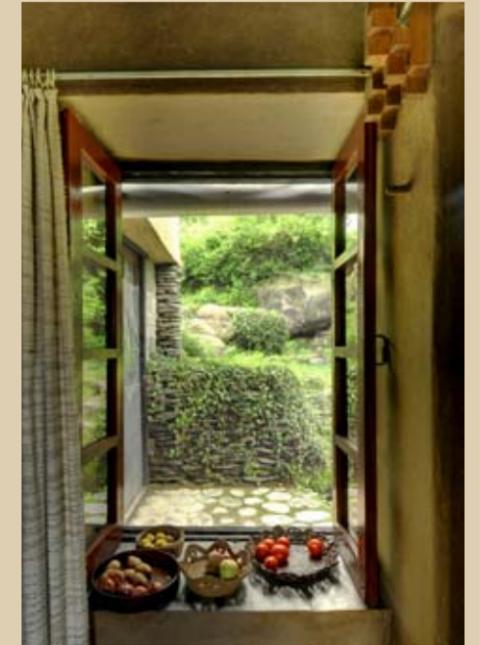
More of his work can be seen at his website www.jogisingh.com



Left: Structural strength of mud brick and burnt brick is carefully utilized with due preference given to the former as they are more sustainable and less energy intensive. Masons that have been working with her for some time now are trained not to compromise on the quality of masonry. Reinforced concrete bands are run above the openings to break the height of the walls and to ensure seismic safety. This is Didi's way of continuing the tradition of stone and timber bands seen in the Himachal vernacular.

Right: An 18 inch thick wall allows wide a sill that can be used for various things. Sills are treated with slate. Openings overlook the landscape in a manner that establishes a connection with the outdoors.

Bottom: In a large-scale project, currently under construction, Didi uses a combination of mud brick, burnt brick, stone and bamboo. She ensures structural safety while working towards reducing the carbon footprint of the building.



DIDI CONTRACTOR

Ideas and Concerns

In conversation with JOGINDER SINGH



Joginder: *You mentioned that you are not formally trained as an architect. When and how did the transition from artist to architect happen?*

Didi: I think it went the other way around in a way. When I was a child my imaginative life was already full of designing houses. I must have designed hundreds of houses before I got to be twenty. My way of daydreaming was to dream up spaces. My parents were both artists so I was exposed to art and advanced architecture early. My German father had been involved in the beginnings of the Bauhaus movement so we knew many artists and architects. When I was eleven I heard Frank Lloyd Wright talk and I was terribly impressed.

I was very aware of modern design and architecture and of spaces and of the fact that spaces had emotional content. I would design spaces for imaginary emotional content, like the studio I would live in or the home in the country that I would live in etc. If my parents had picked up on my proclivity towards architecture I would have been trained as an architect. But in those days there was this myth that women are bad at mathematics. And I was not interested in arithmetic. But I was fascinated with geometry. So it was assumed that I would be bad at the engineering part of it.

When I got to college I discovered that I was very good at Algebra. I probably could have done it, but at that point I

was more into being myself, rebelling, playing the guitar, writing poetry and so on, so architecture sort of fell by the wayside. When I got married and came to India I thought I'd design a house to live in. I was still painting actively at that time. Finally I did design our home in Juhu. I must mention the joy the first day I sat there in the morning and the light came in the way I'd planned it. It is such a great moment when you've transported something in your mind into a reality. Later I got a chance to design the interiors at the Lake Palace at Udaipur. I was always interested in building.

In painting I really got bored with this bourgeois thing of a framed image on a wall. I would rather have something you can enter, interact with and move through. I designed umpteen houses that never got built. I would refine my ideas watching what people were doing. I wanted to design a house in adobe purely to have a wall where the earthen surface would interact with light. I wanted to play with earth and shadows. When I was a child my parents had bought a house in New Mexico, which was made out of adobe and I spent two summers helping them renovate the house in adobe, so I understood the techniques.

In India I fell in love with Indian village architecture, the village shrines and their entire earthiness. Victorian architecture was around one and the early Indian

Modern. The Indian Modern does not suit the subcontinent like the village architecture does. I loved the aesthetic of it. I photographed and sketched the spaces. So it was a long interest. It wasn't a switch over. It's just that I did not get the opportunity to build in mud until I was given the money to build for myself. This led to a whole spate of building. I've built many projects now.

Joginder: *What else would you say are possible influences that have shaped your architecture to be what it is today?*

Didi: Studying Indian spaces, sacred spaces. I've always been interested in Dynamic Symmetry, how you can relate to it. I used to do a lot of origami, a lot of gardening. I love Indian Village architecture and I have always been annoyed that the elite felt that they couldn't live in a mud house. In Taos, New Mexico the *most* elite houses *are* adobe. I've done sculpture too...played with clay. Then there is the whole aesthetic of it. The human eye has seen mud walls for such a long time that something resonates.

To me the Indian village is full of beauty and those are all things people have made for themselves. And then having a chance to play...unfortunately a building needs very expensive art supplies, therefore clients. I don't believe in doing anything purely because it looks nice. It should also serve a function. And the aesthetics should contribute to and not diminish the function and each function should be as aesthetically presented as possible, which does not mean adding ornamentation. I very much sort of subscribe to the pure Bauhaus ideal of Form follows Function. But that needn't be sterile and cold. It can be a handmade function, a warm function. I envy the

potter who puts things in the kiln where they are transformed. I love the moment when I turn my designs, for the process of building, over to somebody else and then the process comes alive. I dialogue with the process. When I built this house I was here all the time with a trowel in my hand, moving things a bit here or a bit there.

Joginder: *Earthen architecture has traditionally been built by the inhabitants and therefore had a high degree of personalization. There used to be a degree of craft always included in Indian architecture that led to its varied richness. This has waned out after the Western Design approach made its way into our country. Your buildings are 'designed' keeping in mind the requirements of the client. Do the artisans / masons who work on these have some leeway in terms of personal expression?*

Didi: Actually, so far, very little. But I am so proud when I *can* turn my senior artisan loose to work on, say, a hillside and ask him to make a path up that looks natural. But then he doesn't always make perfect judgments yet. He does not have my background in design or the eye I have developed. So I am a controlling artist, but I like to include the artisan and I inter-relate with the artisan while I am working. I'm most thrilled with the influence I've had on some of the artisans. They have made changes to their own houses based on their work with me. When I'm working I'm also thinking structure and I find a lot of artisans can't visualize what the roof is going to do while putting in the foundation, can't comprehend the complexity of it. Which is, perhaps, why often the local vernacular is rather simplistic structurally.

Sometimes, while building, I tend to leave a niche here or an alcove there.

One of my masons has got the aesthetic. I would like to transmit more, a little more sophistication. I do try to teach them to see. There is a very interesting philosophical direction one could explore at length between what is intuitive and what is mathematically calculated, what is envisioned and what is response in the moment. And there is, I think, an ideal balance between the more abstract intellectual and the spontaneous. It is a complex thing and I'm trying to bring this language to the artisans in their own language.

Joginder: *Is the mud you work with straight from the site? Or do you have to source it from surrounding areas? Is it stabilized or treated in any way prior to the construction?*

Didi: Since my primary concern is ecological, I use earth from the site. One of the things in my work that I'm very interested in is what happens to the material next. And the best thing about a mud house made with pure adobe that is *not* stabilized is that it could grow an excellent vegetable garden. Once you've added cement to stabilize the mud brick the soil has lost some of its productivity, it's lost some of its ability to re-establish a good colony of microorganisms because cement acts as a biocide. I try and limit the number of biocides in building. If a site does not have really good earth I'd rather bring in clay or sand or straw to get the right mix. Once you've added cement to earth, it's like the earth in a baked brick: it can no longer enter into the agricultural cycle, it is no longer beneficial. It mutilates the cycle.

I'm very concerned with the idea, not just of recycling junk now but of how things that we use could also be planned to be part of the cycle in time. So when

you build you should also think of the ruin that it is going to make. I actually prefer the shaped slate that you get from the river bed instead of the cut slate because the former are shaped by nature. It all depends on the amount you take from nature. The solar cooker thrills me because you can meet a human need without *changing anything*. I think there is a whole *new* direction that design *will go*: one that cooperates *with* natural properties.

Joginder: *Kindly describe the tenets on which the Didi Contractor architecture is based?*

Didi: Respect for nature, respect for tradition, respect for materials, particularly cultural respect. I believe in taking the tradition, hearing it and dialoging with it, not becoming subservient to it. I believe in proportion, believe that the eye has the ability to measure. There have been studies that human beings can detect the golden mean. The discovery of dynamic symmetry to me as a teenager was a very important thing.

Joginder: *Your buildings indicate a very conscious attempt at using Light in Space. Could you comment on that please?*

Didi: Light is like a divine gift. Its like a deity...light and air, I try to bring them in. This goes on to sound. Mud walls have superb acoustics. The elements combine to create an atmosphere. I don't see architecture as separate from spiritual practice.

Joginder: *With almost two decades of an architectural practice in mud, have you seen clones of your work?*

Didi: Yes, but only parts, ideas for details

that are mostly copied out of context. I've had an influence, but only by way of imitation. Often when I visited museums I have marveled at little objects where you can almost feel the artist's delight at having created it...delight at having discovered that form. In India, Laurie Baker's work has that quality of delight. I would love it if people were delighted and inspired by the ideas in my work to find their own forms rather than imitating the outer forms.

Joginder: *Himachal lies on an active seismic zone. The traditional buildings fare quite well in the event of an earthquake. Have you incorporated details in your buildings to make them resistant to earthquakes?*

Didi: When I first came here and visited villages I studied the buildings that had withstood the major earthquake of 1905. I understood the principles and have incorporated them with modification. All the old buildings had continuous bands in timber. Now timber is not so easily available so we've replaced the bands with reinforced concrete. The roofs and walls are designed in a manner that in the event of an earthquake they would fall outward.

Joginder: *Who are the clients that you cater to? Is your work done for people who are already convinced about the benefits of earthen architecture or do you have to engage in convincing the client to your way of building? How uphill has the task been?*

Didi: Very uphill. But basically people who come to me are people who *are* interested. Each client has to be involved in the process; you have to take them into your thinking. I have had only one local client, which in itself says a lot. Most of my clients are academics, writers and NGO workers, people who are already

thinking in a positive *ecological* and sociological direction.

Joginder: *In terms of cost how does it work compared to conventional architecture?*

Didi: It is usually one third less, because you source the mud and rock on site. You could go further down but I haven't been pursuing monetary cost. One of the main philosophical ideas that I have been concerned with is what we loose by commodifying everything. There are so many other values that should stand ahead of commodification. I am much more concerned with the ecological cost of building and the *cultural* cost of buildings that don't take ideas of Indian Aesthetics into cognizance. Some of the modern buildings in India are very good but they involve commercial imperialism, which is much worse than political imperialism was. Some are cutely Indian, but insult a tradition that had much more depth.

During building, I am very conscious of where the money is going. If I'm buying cement, the money is going up and away. But if I'm making mud bricks the money is going down to support someone who can't find other work here. It is a luxury to be able to do that but it helps overcome, to some extent, the inequity within the society. *Social* costs are very high on my agenda.

Joginder: *Your architecture is quite regional and rooted in the context in complete contrast to what one sees in the cities these days, which is an architectural anarchy of sorts. Do you think modern Indian Architecture has an identity?*

Didi: I think it is looking for one. Modern Indian culture doesn't have one either. It is being mostly destructive

towards traditional identity. I think Indian identity is something very deep and human identity is something most of us have lost. We are becoming creatures of consumerism. Consumers are dehumanized in some way. I feel that the current technological advances could allow us to live in harmony with nature. We don't really have to live in cities. Technology has opened up possibilities of decentralization. Indian cities, to me, are a passing moment. But maybe that is because I'm 80 and have seen so much change.

The shopping mall with a slum next to it is not a permanent reality. Change will come as the resources get depleted. I don't really see solutions for the current contemporary commercialized world. It will have to undergo mutation to survive.

Joginder: *You have been taking on apprentices? Have any of them exhibited a sustained interest in continuing to practice architecture in mud or have they succumbed to the urban demands of the profession? Do you think an apprentice manages to translate the ideology in its entirety or is there a dilution of sorts in translation?*

Didi: It depends on the apprentice. I have been taking on whoever has come to me. I'm *more* concerned about the team of artisans that have been working with me with their hands. I do talk to these city kids who come to me with their educated backgrounds and I think it often makes a real change in them. My alternatives may not be the right ones but it gives them the idea that there *are* alternatives. It certainly makes them think more. A few apprentices have gone ahead and pursued higher studies and then amalgamated things. I do not want to spark a clone. I want to spark an interest. The thinking is more important than the work. The work

is merely a product of the thinking.

Joginder: *'Sustainable architecture' 'Appropriate Architecture' 'Environment Friendly', are buzz words that one is continually bombarded with these days. How do these translate in your ideology?*

Didi: Well they are absolute *imperatives*. They translate as imperatives. That is why I look at ecological cost above monetary cost. Which does not mean my building is going to cost more. It just means that I am more concerned with the ecological cost.

Joginder: *Finally, what is the Didi Contractor legacy?*

Didi: (Laughs) Wait till I die, you'll see! I don't know. Might be nothing at all. Actually I don't really believe in the individual as much as the ideas that are floating around. If I've left some pointers behind for people to see they may or may not get inspired. Who knows? I'm concerned with learning from the past and I would like not to harm the future but meanwhile one is concerned with the present.

