Working With Corbusier

, Wednesday 06 May 2009 - 09:17:37

Discourse was being held at TKNRK office then. This article was read in the Essential Reading series of Discourse. This one was a very inspiring reading for everyone, helped to know in depth about the working process, intimate life of Le Corbusier. This article is originally written by Jerzy Soltan, worked with Le Corbusier for years. Here it is for those who couldn t participate in those Discourse sessions while we read:

Working with Le C**orbusier**
August 1, 1945 the first day of my work with Le Corbusier. Around nine in the morning, I was at his atelier, 35, rue de Sevr és, in Paris. Physically, the atelier exhibited a strange charm and indeed, was the antithesis of modernism . From the outside, from the little patch of greenery the Square Boucicault and the rue de Sevres you confronted an old, quiet, classicist fa çade. You entered the building through a little gate, part of a large porte-coch ére, and passed into a tiny courtyard. Here you were under the eyes of an imposing female concierge. She examined you warily. From the courtyard you turned left and got the full taste of the premises: a huge, white gallery-corridor some thirty yards long, five yards wide, wide, with a long row of classicist bay windows on your right leading to a cloister garden. All of a sudden you realized that you were in a Jesuit monastery. The bay windows opened onto a sunny courtyard. The brilliant light filtered through old sycamore trees. A mosaic of leaf shadows danced on the floor around your feet in the courtyard you noticed one or two black-cassocked figures, breviaries in hand, quietly enjoying a monastic promenade. The sun s rays were full of dusty particles. The building was old, dirty, smelly, and broken down. It would later be totally razed, but when I entered it for the first time it was very much there, full of an odd sort of attraction. The ground-floor galleria let to a staircase landing was a door in total darkness. The door let to the upper-level equivalent of the ground-floor gallery the atelier!

Eighty to ninety feet long and ten to fifteen feet wide, the atelier was in fact a section of a long, white, dead-end corridor. A row of large windows was on one side, and a blank wall faced them. This wall separated the atelier from the neighboring Saint Ignatius Church. Sometimes, on particularly quiet days, or in the evenings after work, or on the weekends, a Bach fugue or a gregrian chant trickled from the church into the atelier. On this summer day, the atelier was not only full of sun, the sound of birds, and the rustling of leaves, it was also full of bric-a-brac. Old drafting tables, broken stools and chairs, creaky easels, broken and half-broken architectural models in various scales, rolls of drawings, drafting utensils- all this competed for space in the second deeper half of the atelier-corridor. And, of course, covering everything was a thick layer of dust. Dust had been gathering here for six years, since the beginning of thewar and the decay of the atelier into a d ébarras. It was awakening at this time to its new, postwar life. The forward part of the atelier was more orderly. Along the outer wall and perpendicular to it were a few drafting tables, some stools and chairs. Drawings were pinned up on the church wall ; facing the windows, between the tables and the wall, a large iron stove, installed ad hoc,

dominated the space. And in front of the stove, wearing indescribably dirty, formerly white drafting overalls, reigned Gerald Hanning, Corbu s only collaborator at that time.
I soon discovered that Hanning, with his so very Anglo-Saxon name, was French! We quickly struck up a close friendship. Now that I had joined him, we would have two people to move around, depending on whom Corbu would assign to what. Since each project had its own microspace, Hanning changed tables as he turned to each of them. At the entranceway, to the left, was the boss s table.

Le Corbusier s working hours were implacably regular . During my four years at the atelier, he worked at the rue de S évres from two in the afternoon to around seven. The hour of 2:00 P.M., I soon learned, was holy. If you were a minute late you risked a reprimand. At first Corbu arrived either by subway (a convenient, direct metro line connected his Michel-Ange-Molitor station with the atelier s S évres-Babylone) or by taxi. Later on he started driving his old pistachio-green Simca Fiat convertible. In his last years it would be the taxi again. The process of returning home revealed quite a lot about Le Corbusier s character. If the work went well, **if he enjoyed his own sketching and was sure of what he intended to do, then he forgot about the hour and might be home late for dinner**. But if things did not go too well, if he felt uncertain of his ideas and unhappy with his drawings, then Corbu became jittery. He would fumble with his wristwatch a small, oddly feminine contraption, far too small for his big paw and finally say, grudgingly, C est difficile, l architecture, toss the pencil or charcoal stub on the drawing, and slink out, as if ashamed to abandon the project and me and us in a predicament.

During these early August days, I learned quite a bit about Le Corbusier s daily routine. His schedule was rigidly organized. I remember how touched I was by his Boy Scout earnestness: at **6 A.M., gymnastics and &. Painting** , a kind of fine arts calisthenics; at **8 A.M., breakfast. Then Le Corbusier entered into probably the most creative part of his day. He worked on the architectural and urbanistic sketches** to be transmitted to us in the afternoon. Outlines of his written work would also be formulated then, along with some larger parts of the writings. Spiritually nourished by the preceding hours of physical and visual gymnastics, the hours of painting, he would use the main morning time for his most inspired conceptualization. A marvelous phenomenon indeed, this creative routine, implemented with his native Swiss regularity, harnessing and channeling what is most elusive. Corbu himself acknowledged the importance of this regimen. If the generations come , he wrote, **attach any importance to my work as an architect, it is to these unknown labors that one as to attribute its deeper meaning**. It is wrong to assume, I believe, as have suggested, that Le Corbusier was devoting this time to the conceptualization of shapes to be applied directly in his architecture; rather, it was for him a period of concentration during which his imagination, catalyzed by the activity of painting, could probe most deeply into his subconscious. It his remarkably sensitive poetic metaphors and associations.

It was not long after I settled into my work routine that I received on of my most intense Corbusierian shocks. To appreciate its intensity, one has to remember my own background. From a provincial school of architecture, I had brought with me to Paris the form-follows-function and neue Sachlichkeit spirit. In my earlier milieu, discussions of aesthetics were simply missing; visual concerns were smuggled in as afterthoughts, if they appeared at all. Such considerations were not becoming to a serious, socially minded architect. Imaginge my amazement, then, when during an argument with Corbu about the final

permutations of the St.-Di é project, he turned to me said, Mais mon cher Soltan, il faut que ce soit beau. This remark, of course, destroyed my argument. I was demolished, demolished but also delighted; Le Corbusier had offered me, openly, aboveboard, a marvelous gift that for years I had been eyeing secretly, from a distance. Il faut que ce soit beau **it has to be beautiful**. To have the guts not only to speak of visual quality but to put one s thought so bluntly!

Hanning left the atelier and did not return. The short-lived trio was reduced again to a duo. It was Le Corbusier and me alone. The financial situation did not improve. The projects were not backed up by any solid commissions, and as a result, Le Corbusier could not pay me. Eventually my military commitment ended (I was not formally demobilized after World War II and six years of P.O.W. camps until this time) and with it military board and lodging. I had to live. Corbu agreed that I should moonlight in the morning and work for him in the afternoon. Through Hanning I obtained some work, first with a group of young former collaborators of Corbu s (Bossu, Dupr é, Miquel and Senvat) and second with Pierre Jeanneret, so that I found myself a member of two duos: in the morning with Pierre Jeanneret, in the afternoon with Corbu.

Most of the people who worked with Corbu had a love-hate relationship with him. A number of factors worked to create this ambivalent response. First, I already knew Le Corbusier well enough to realize that he was not easy to get along with. He was quick to anger and could be quite nasty. Second, there were political objections to him. After all, he did go to Vichy to sniff out the P étain regime. Nothing came of it, but for those who want to see the worst, the fact remains. These same people forget that some twenty years earlier, Corbu had worked in the Soviet Union backed by the Trotsky group, the more enlightened, artistically receptive milieu in the Russian Revolution. **When Stalin and his obscurantists came to power, Le Corbusier s building chances in the Soviet Union evaporated. Neither could Corbu s enemies guess that five years later he would undertake his fruitful relationship with the Roman Catholic church through the artistically active French branch of the Dominican order**. It is in fact owing to this order that Le Corbusier got the chance to realize some of his most meaningful work: the chapel at Ronchamp, the monastic building complex of Notre Dame de la Tourette, the unfinished chapel at Firminy. Politically, nonetheless, Corbu represents a confusing, contradictory picture and one easily subject to different interpretations according to the bias of the observer. To some, his backing by enlightened Marxists and condemnation by Stalinists indicate a praiseworthy sort of radicalism. To others, **his distance from the French Communist party, to which several of his close friends like Fernand L éger and Picasso adhered, was proof of his disloyalty** . Again, some would see in his dealings with the Vichy regime evidence of fascist sympathies, while others would emphasize his quick retreat from that group. And finally, Le Corbusier s work for the Dominican order might appear daring and progressive to some (the order was unorthodox enough to have had difficulties with the Vatican) and a retreat into clericalism to others.

My own contact with Corbu led me always to think of him as a man full of boyish eagerness to try everything to win a commission, a tempting piece of work, an exciting project. Never mind the dangers, never mind the not-yet-healed wounds from the previous skirmish. As long as a temptation was there, Le Corbusier would jump at it. For those who are not able to accept the depth of his youthful eagerness to land good work, C**orbu will always remain a political mystery**. His artistic complexity was so evident that corresponding simplicity on other levels (political, for instance) seems to me to have been almost inevitable.

During my very first days with Corbu, I realized that while I was, of course, expected to give the projects as much of myself as I could, each project was really his own- his own flesh and blood. My experience in Poland, working as a student for mature, locally famous architects, had led me to believe that I was hired to give the project if not its total quality, then at least its unique coloration. I often suspected that the project meant more to me than to my boss, that, in fact, the boss did not live the work in full. In Le Corbusier s case, **one never had any doubt that he was willing to give it his whole self**. Some time later, when the atelier was in full swing, I asked him what would be the optimum number of projects he felt he could handle simultaneously, on different levels of advancement; what number would make him happiest? Corbu, perplexed hesitated for a while and then shot back, Five . Indeed, it it possible to have more if one has to hold them totally?

Yes, Corbu s work was ***his***. It was, so to speak, physiologically his. **But at the same time**, he never spoke about the processes related to the production of his work in the first person. **He would never say I . It was always we** . Other architects, whose contribution to the birth of a building is often not much more than hiring the right team and drinking the right cocktail to secure the commission, would sprinkle the conversation with I s : I did it, I imagine, I feel, I.. .. .. it sometimes seems that the number of I s is in inverse proportion to the boss s input to the work, inverse to his creative potency. In Corbu s case, the we becomes, then, quite proper. The project was his. Applying this inverse logic, he would we did it, we imagine, we ll do it this way. Perhaps too, the plural represents a kind of residue of the old Esprit Nouveau times, when he wrote under several names to make the publication more convincing. A crowd of participants is more than a Chales-Edouard Jeanneret, an Am éd ée Ozenfant. We: Jeanneret, Le Corbusier, Saugnier &. Sometimes the we became a royal pluralis maiestatis. Le Corbusier would jot down a new variant of solution. A few minutes later he would pick the sketch up again and say, Well, here is something we drew as a possible counter-proposal.

When someone literally lives his work, when his very existence constitutes a creative process, the strain of that process can sometimes be a curse. Le Corbusier himself called this phenomenon les angoisses de la cr éation the pains of creation. I quickly discovered just how intense those pains could be, not only for the author, but also for his entourage, myself included.

The projects in the atelier were preceded by serious and conscientious research. Conceptualization, of course, went on simultaneously. A half-lucid, half-unconscious feedback and feed-forward process operated in Corbu s mind . (I learned then about the investigatory method Le Corbusier wanted applied: from the general to the particular and from the particular to the general. I will write more about this method later.) He immersed himself deeper and deeper into the project. Each afternoon he brought from home new ideas, new sketches, new notes. They were not easy to decipher. Corbu had the ability to communicate clearly what he really felt had to be done, but he also had his own sense of how much information to give, where to stop. The sketches at some point became fuzzy, a sign that the represented more his digging into proposal. He would then pass them on to me- to us- sometimes with a mischievous smile. The role of the team was then to interpret, clarify, and present the concept for his scrutiny, in a precise graphic form, sometimes as a model. The more intuitive his thoughts, the more difficult it became with the help of Hanning. Later I had to do it by myself in the empty atelier. Later still, when the team grew, it was the whole group who put heads together in consultation, led by the most experienced job captains, experts in Corbu reading.

As time went on, Corbu s notes became more and more complex , his evaluation of our interpretations more sharp and intolerant. Every day at 2:00, just before his appearance, a cloud of panic hovered over the atelier. And then the day would come when the door opened and one felt that Corbu was a different man: He zooms directly to the table of the job captain responsible for the project, keeping his hat and coat on. He is in a hurry. Awkwardly, he pulls a crumbled piece of paper from his pocket. He puts it on the table and says, This time I believe we ve got it. He is smiling. I give a sigh of relief. Maybe the world is not so bad after all, and I am not such a complete idiot. Corbu leaves me with his latest product. He leaves me to absorb it. Later on the will approach my table again, but instead of starting another discussion of the same project, he will tackle a completely different subject. Soltan, what about a little repast today? We received a small gift from the country and my wife s rabbit in wine sauce is really quite good. This invitation became the ultimate sign of peace, as well as approval and tanks for the last few days work. It was also an apology. Corbu was aware of his weaknesses, the intemperance of his behavior. He could not overcome it, but he tried hard to counterbalance it. For me the dinner was not merely a social pleasure. Corbu guessed, as many years later he frankly admitted, that the moonlighting did not represent a basis for an adequate budget. In fact, during this period I was often simply hungry. Food was scarce in France in the summer of 1945; all of it was very expensive, and most of it was tightly rationed.

During the years with Corbu, I experienced several periods of these pains related to the conceptualization of the incoming projects. Indeed, what struck me as particularly interesting was the premanence of this anguish. One would have expected the intensity of pain to decrease, perhaps even disappear, with age and experience. But the truth of the matter is that instead of diminishing. it tended to grow. Perhaps this growth had to do with the growing sense of responsibility, of expectation of permanent excellence, and of fear that the previous success was the last one, that this magnificent and mysterious ability to synthesize - to create - might be exhausted, might even die. It is also clear that the pains accompanying the birth of concept are in direct proportion to the concept's boldness and novelty. The more daring and authentically inspired the aim, the more talent involved in conceiving and carrying an idea through to completion, the more one pays spiritually for it. Conceiving mediocrities does not require creative mental agonies - life becomes smooth and even.

To catch the ineffable, one has to use sensitive hunting techniques. My first particularly complex problem was the town center of St. - Di é. Corbu brought some sketches from home. He wanted to pursue his peculiar pictorial thinking in the atelier. He sat down at my table and fumbled for some drawing tool. I helped him to an array of pencils and pens. He rejected them all with signs of disgust. How could I suggest he use such inappropriate instruments to perform such a sensitive operation? Haven't you a piece of charcoal? he asked. No, I did not. In my own limited architectural career, in the rare moments when the boss would sit at the table and try to convey some ideas pictorially, a fat pencil or a pen would suffice. Thus I was baffled. Charcoal belongs in a painter's studio, for sketching an old-fashioned still life or nude, not in a modern architectural workshop where no-nonsense things had to be traced in a sachlich atmosphere. I remember ow, in my past, the less the bosses knew about what they wanted to do, the fatter the pencil would be, the more aggressive the ink, the more permanent the nonimage. One line would follow and cover the other, strengthening the brutality of the unknown strong, full, sure lines. The surer the lines, the less content there was behind them. One would be tempted to hypothesize that the shaky line of the charcoal and the fluent line of a fat crayon or magic marker represent two different worlds. One deleves into the deepest areas of consciousness and the

subconscious in search of inspiration. The other attempts to hide its emptiness behind a plethora of bold and assertive lines. These lines reveal an instinctive hope that the boldness will, when applied long enough, be converted miraculously into ideas.

Now, all of a sudden, Corbu wanted a piece of charcoal. I found a forgotten stub in a drawer. He started sketching with a deliberately shaky hand. He stopped for fractions of a second. He went on. Meanwhile he succeeded in erasing half of what he began with. The charcoal stub was ridiculously small in his big fingers. He stopped again. He returned with a light, jittery line to the spots that had already been drawn and erased. The new line was almost the same almost. He barely looked at the drawings. His eyes were turned inward , attending to this subconscious. Finally, he stopped. He looked this way and that at the drawing. He pondered it, and then he said, Maybe it's worth retaining? He pulled out his own pen, an old Parker 51, and traced with a slow movement on top of the charcoal the final (for the time being) version of the concept. Then he looked at the fancy utensils on the table: automatic pens, mechanical pencils, those brand new tools the magic markers, all the drawing gadgets he had been fascinated by. He fumbled among them and said, Il ne faut pas immortalizer des âneries (They are no good! One should not immortalize stupidity.).

Another example of the hunting for excellence technique was Corbu's use of model building as an integral part of the design process. Presenting architectural ideas through a model is, of course, an age-old visual communication technique. However, architects normally use models to communicate things alredy conceived and even drawn. Used in this way, the model becomes merely an additional way of presentation.
Obviously, a spatial presentation of an object conceived for space may in some cases reveal features not noticeable in the mostly orthogonal projection of a technical drawing. Perspective isometric or axonometric drawings might be more revealing in some respects; they ted, however, to neglect or distort some important features of the object (e.g., proportion). An obvious mistake in a project revealed by the model might be corrected, time permitting. Yet it sometimes happens that the model reveals an error inherent in the very principle of the concept or, in fact, a lack of concept. Correcting is then of no value. The project should be started anew. And then again and again it might go wrong if the process of checking through the model occurs too late. Architects do not normally build models as an integral part of the process of conceptualization. But this approch does more than spare mistakes and time by eliminating negative features. It also introduces completely new possiblities, increases the scope of the results. In my architectural work before joining Le Corbusier, I participated in, or witnessed, many visual disasters caused by the late introduction of a model into the design process.

Likewise, in my after-Corbu time, I watched how the matchbox buildings were expected to be ipso facto improved and enriched by introducing, for instance, large empty volumes. Thus any void, any double, triple or quadruple aperture between floors became synonymous, for many, with excellence, whatever purpose, size, shape, or relationship it might represent. Any void, any hole, began to be glorified as INEFFABLE SPACE. Timely use of a model may indeed change meaningless emptiness into positive expression of spatial relationships and may help greatly in rational connection of function. At the rue de S èvres, the model did not have to be precise or particularly elegant to fulfill its purpose. On the contrary , a liked-out model might be rejected as confusing; it pleases the eye not through the quality of the principle it represents but as an object, slick and smooth.

What charcoal represents on the plane of a drawing, plasticine represents in volume. Little bricks of this fat clay are not only easily cut but are easily malleable. I watched them under Corbu's fingers. I saw how the charcoal sketches began to appear as interpretations of the clumsy, topsy-turvy clay toys illustrating the burgeoning idea of, perhaps, the city center of St.-Di é or the first proposal of the housing development of La Rochellle. The charcoal followed the spatial study in clay. The charcoal sketch was translated once again into the language of plasticine and then went back on paper. And so it went until the black ink of the fountain pen fixed the project for a while.

When Corbu accepted the study of the Currutchet House in La Plata, the job captain of the project was a close friend, Roger Aujame. The La Plata-Aujume team's territory in the atelier was adjucent to mine. Thus i could follow the development of events there. The project from the outset became a typical model-leading case. The lot was small and tight. The plan logically had to rely on a vertical organization. The other planning trump cards were terraces and brise-soleils (sun breakers). Distributing spaces (open and enclosed) on the numerous levels, connecting them with ramps and staircases, and covering them with different types of roots, ceilings and flying slabs became the main themes of the spatial game. The relations between solids and voids, orthogonal and slanting, were very complex indeed. To develop these relationships on paper using standard projection techniques was impossible, particularly if developing means more than connecting the physical sense of the word making the respective areas accessible.

gIl faut que ce soit beau. after all, the plan was conceived in this particular sophisticated way in order to give occasion for developing sophisticated design as well. No amount of spatial imagination can grasp the complexity of some relationships if it is not helped in some new way. Even less can real visual quality be infused into these relationships. This new way amounts simply to giving the model, and not the drawing, the leading role in the process. The role of the drawing is thus limited to annotating the model.

Some analysts attribute the success of these very spatial projects of Corbu's simply to his talent. They are, i think, both wrong and right wrong if they assume that the program in its total complexity was manipulated in the traditional way by an extraordinary spatial imagination, but right if they accept that his talent also encompassed the ability to devise techniques of investigation and control that allow the imagination to operate on a higher, perhaps new level. It seems to me not only possible but useful to separate these two abilities. They are obviosly connected, but i submit that a regular - normal spatial imagination could assimilate the investigatory technique drawing follows model and hence considerably improve the understanding and further the quality of the proposed space. At least one could expect that most of the blatant, disarming na ïvet é and blunders would be eliminated. Conversely, one could argue that a traditional analysis of Corbu's buildings, conceived in the manner mentioned above, yields little. Indeed, a normally prescribed, long series of plans or sections of the Currutcher house or the chapel in Ronchamp, based on the usual projection, taken even in the smallest of intervals, and executed with painstaking devotion, results in a number of drawings, handsome in themselves perhaps but meaningless as far as real comprehension of the space involved. Yet it is this type of investigation that one could see performed in the most renowned schools of architecture in the world in the period when Corbu was particularly in vogue. Parenthetically, it is logical that this kind of misunderstanding became part of the subsequent disenchantment with Le Corbusier and eventually, in many cases, an angry rejection of his work.

The following saying of Corbu's strikes me as fitting here a good antidote to a large dose of thinking form : Pour bien dessiner il faut du g énie (To design well, you need talent. To plan well, you need genius.). Many students of Le Corbusier who know him mainly through his form seem unaware of this motto. For them, the notion of planning is probably understood as a dry list of required square footages, functions to be accommodated, prescribed dimensions, and so forth. In this perspective, the precooked plan is presented to the architect as a must. Indeed, this way of understanding the notion of planning is very far from what Corbu intended.

I worked with Gerald Hanning on the project of the unit é du grandeur conforme (unit of the proper size). It was a theoretical project preceding the project of the Marseille unit. At the time we studied it, nobody had any idea whether it would ever be erected much less erected in Marseille. The whole plan here was proposed by the architect, starting with the optimum size, number of inhabitants, and hence types of apartments: their spatial principle, the principle of their grouping. To each of the planning items, Corbu introduced his own peculiar attitude in its manifold aspects. He strove to convey the reality and prose of life as well as its charm and poetry.

The holy Corbusierian principles of modern architecture would be kept: free plan, independent construction, free ground floor, free elevations, and open roof. But then these principles in turn expressed a variety of others. Thus the freeing of the ground represented economic and socio-political attitudes of Corbu's. The terrain would be the property of the community. The socialization of the terrain would lead, of course, to many new planning possibilities, circulation solutions, and so on. The next step was the visual expression of this common ownership of the city terrain. The type of construction allowed the building to be raised from the soil so it barely touched the ground. But then and purely visual longing to express the new space , the continuum of space a relatively recent notion introduced to modern language by science and viaully tackled already by cubism. Raised above the ground, on its independent construction, the building ceased to be a spatial obstacle, particularly as it was raised on a powerful base slab, the artificial ground (le sol artificiel).
It floated in the air. Indeed, there was a continuous air flow below and around it. Around also means above, on top of it. The roof, now something mroe than mere protection from snow or rain, had to open up for more active purposes. Everything connected with view belongs there: sun, space, greenery, the sky and its clouds, the landscape with its treetops and mountaintops, as well as its man-made domes, towers, and spires. But these essential joys (jois essentielles) belong to everyone. They are collective property. They are also good catalyst for social life. The activities on the top should therefore be community activities. A gym could perhaps be constructed, with a track around the roof slab. Next, a kindergarten bright with its brilliant colors basking in the sun.

But then what would happen between the base and top? What would be revealed outside by the facades? At the foot of the building and on its top, community; in between privacy the individual framed social life. What is individual should logically be formulated by the individual user. To what extent can this be done? How far does technology allow the individual family (using perhaps some combinatorial analysis) to create a small, private world around itself? Not much seems to be possible in this respect, particularly given the conditions in 1945 (just as in Corbu s earlier projects that were not built at all). Yet it is enough to have a look at the perspective views of two housing units traced by Hanning and then, as always, studied in detail and filled in Corbu to see that the individual housing cells are all different. (See Oeuvre

complete, 1938-1946 [Zurich:Girsberger, 1946], p. 172). The overall rigor was secured by the sun breakers, the organization of which remained in the hands of the master builder, the architect of the vertical city. Later on, when the theoretical study became the Marseille building, even this small attempt to individualize the cells proved unrealistic and was dropped. The perspective sketches became, therefore, the only real evidence of the underlying idea.

The allocation of space to services has always been a debatable point. Should it not be on the ground floor? Or at least on the second floor, if the ground level has to be completely free? The whole building traffic has to pass through the lowest level. Everybody would then notice the services and drop in when passing by. The logic of this seems undeniable. On the other hand, if the building is big enough, it might deserve not only feet and a hat but to be given a heart , a center where the inhabitants would converge. To converge is more than to drop in when passing by . It requires more of a mental and even. For some inhabitants, physical effort. It becomes an activity in itself and not just a by-product of entering the building. It does not merely strengthen the entrance, which exists independently; it creates a completely new occasion for the enhancement of life. And, after all, is it not the good planner s task to identify new values in life? Of course, such an undertaking is always a risk. An improperly conceived element can wither and become a painful liability, if not disaster. A planning hazard is involved here. No one, however, can accuse Corbu of shrinking from risk. There is also the visual factor. The service area is in itself a tempting architectural theme. Properly expressed and located, it could help the inhabitants identify the position of their individual dwellings on the face of this mountain. It is easier to recognize a site in relation to a defined center than merely somewhere between the base and the top of the tower.

The planning of a housing unit for a few hundred apartments represents an exceptionally rich problem. Let me compare it with the Currutchet house in La Plata, Argentina. Infusing excitement into the planning of a medium-sized house for a surgeon, on a tight downtown lot an infilling allowed less room for the imagination. Yet the very ordinariness of the subject represented the main challenge. The smallness of the lot meant piling the necessary spaces up. Piling up meant that vertical connections became important. The work of a doctor meant strong connections with the outside world the patients which led to problems of circulation again. All these considerations belong to the domain of logic, the prosaic. In the case of the La Plata house, the poetic dimension lay in raising the physical connectibility of the respective function to the level of a continuum of spaces. To achieve this, open volumes were woven into the fabric, terraces, and wells/shafts. Open volumes meant a lot of outer surfaces, a situation somewhat similar to that of Poissy. But here we were in the brise-soleil period. Thus these devices were profusely used to protect apertures and terraces. In this way a banality was converted into a plan for a spatial bibelot . Il y a suffisamment d él éments ici pour faire une architecture, Corbu said (There are enough elements here to make an architecture). A particularly sophisticated design method was to be used to put into space this theoretical set of requirements. A planning paradigm, rational and poetic but verbally describable, had to be given visual form.

In the early stages of my work at the rue de S èvres, I learned that here too a project had to be preceded by data gathering and processing, a research study. It was during these days that I first heard the words from general to particular and from particular to general . •h I do not remember when and how Corbu used this formulation of the research strategy for the first time. In itself the principle of considering any project both in a larger context and accepting the impact of

even small details was not new to me; all architectural offices accepted that. What struck me as new was the trees on the simultaneity of the two efforts. Yet it was so perfectly logical! To allow one of the two poles, the general or the particular, to take the leading role amounts to accepting a minor role for the second. The complete simultaneity of these studies is, of course, physically impossible.
Realistically speaking, it is enough to have the two attitudes interwoven. This interweaving requires a considerable amount of discipline. It is so tempting when embarked on one of the two directions to pursue one at the expense of the other to its ultimate resolution.
The atelier was quite well prepared to deal with some of the introductory studies. Indeed, often enough Corbu referred us to his and Pierre Jeanneret's collected works. Go and check this in the Girsberger &.., he would say. (Girsberger was the Swiss publisher of these books.) Thus, using the already acquired experience catalogued in an impeccably organized way, Le Corbusier was assuring his work's continuity, saving time and money.
When I first arrived at the atelier, I discovered that among the studies in progress, an important role was assigned to the new system of measures baptized Le Modulor the Golden Module. The project reveals a great deal about the duality of its author's personality. Conceived to unify the world's technology, it was intended to add a certain humanistic quality that technology lacked. On one side, it used mathematics in an attempt to operate on the objective, quantifiable level; on the other, it attested to romantic, lyrical longings to capture beauty.
At this time, I was Corbu's only assistant and I was at the rue de S èvres only in the afternoon. All work had to be done in these few hours. The Modulor's turn was usually after the other projects had received their daily attention. The sun was setting. It was getting late. Bach's or Handel's music penetrated the atelier from the adjacent church. A perfect mood was created for this type of project. Corbu was not strong in mathematics, but he was very much under its spell. He started the Modulor time usually with some remarks related to his work with Hanning and his collaboration with Elisa Maillard, a mathematician who helped him during the first stages of the study. But soon •gthe objective pole •h was abandoned, and Corbu delved with delight into the mythical aspects of the golden section, Pythagoras, the Fibonacci series. The role of the enlightened outsider played by Maillard and her mathematics was taken over here by Matila Ghyka, the Greek scholar and aficionado of the golden mean, whose writings about it are an interseting mixture of objective information and poetic fuzziness. It was clear that Ghyka took particular delight in this fuzziness.

To work with Corbu on that subject vividly illuminated the role of intuition in human creativity. Sometimes his sentences were impeccably clear and purposeful. At other times, he fell into something that might appear ot be gibberish, only to become purposeful again. In no architectural or urban design projects did I notice this same level of objective and poetic intensity. This intensity is illustrated by many of Corbu's drawings, but the best visual symbol of the modulor, better than the popular silhouette of the human figure with the raised hand, is seemingly insignificant drawing (Le Modulor [Paris: l'architecture d'Aujourd'hui, 1950], p. 100). There, after an infinitely long, precise, and technical presentation of the combinatorial possibilities the Modulor panels could offer, Corbu balked at this objectivity, thumbed his nose at the reader, and drew a little willfully na ïve flower as the summation of this technological display. In one stroke he placed what was serious in this study in proper perspective.
Time went on. The situation of the atelier improved slowly. Soon things became stable enough for Corbu to risk accepting more help with his work. This help materialized in the persons of Roger Aujame and Andr é Wogenscky. Both men were French, both at odds with the Ecole de Beaux Arts and interested in Le Corbusier. A third important personality dropped in every now and again,

the structural engineer Vladimir Bodiansky. I soon learned that he was of Russian extraction and by profession an aircraft designer. Far older than we were, he could do some work with Le Corbusier.
Our monastic atelier protected us from the intemperance of the outer world, news about the war included. Eventually, however, some information penetrated even the thick walls of this fortress. We learned, for instance, about the supposed sensational design of the Japanese submarines. We also learned about they were tailored to the measure of seamen different in size from Europeans. I am reminded of the first words of greeting uttered by Corbu at our initial encounter when he scolded me for being too tall. I therefore half-seriously, half-facetiously proposed that we compute a new series of measurements for the Modulor based on the dimensions of a man 155 or 160 cm. tall instead of the 175 cm. we were working on then. This proposal led to new discussions on the subject of how universal the measurements, and hence the whole system, could be. All of this occurred on the eve of Corbu's first postwar trip to the United States. He was going there as consultant to the French government. The problem: design of the seat of the United Nations in New York, a great international task that would mean several trips over the ocean for Corbu and would end in architectural war.
At the atelier, the project of the high-rise housing unit began to pass from theory to reality. Andr é Wogensky took command of it. I was assigned to the urban design section of the office. At this time that meant La Rochelle and St.-Di é. I was also in charge of the Modulor. Corbu left for the United States highly excited over what would happen in New York. We expected that he would be absent a long time. But suddenly, a couple of days later, the door opened and Corbu entered with a small suitcase. He was obviously coming directly from the airport. Keeping his coat and hat on, he zoomed to the Modulor table. The short sojourn to the United States revealed to him a blunder in the Modulor reasoning. The Americans were tall and the United States intensely industrialized; on had to recognize these facts. The Anglo Saxon measures the foot, the inch are far more human than the metric system's meter, an arbitrary segment of the equator's length, or the centimeter, an arbitrary part of the meter related to it only by decimal order. A six-foot-tall man should be the starting point of our anthropometric considerations. Corbu was enchanted by this new development, and he left me with the new computations. Soon he was on his way back to New York.

The atelier settled down to work. A few new people joined us. Wogensky tried to introduce some real order. Visible proof of his efforts was the physical change in the organization of space. First, all the bric-a-brac filling the rear part of the atelier was cleaned up and classified (real treasures in drawings, models, books, and magazines could be found there). The nobility of the atelier's proportions became even clearer. Then the drafting tables were moved from the window side to the wall side of the corridor. In this way a long series of quasi cubicles was formed by the tables abutted on the dead wall and perpendicular to it. A long table was placed along the window wall. The space, we discovered, was sufficiently wide not only to provide room for adequate circulation but also to allow people to sit and work at the table. The whole setup proved far more roomy than the old one. Contact with the windows was more direct, and through them we could see the courtyard with its superb trees. We could then sense the monastic mood of the building even more deeply. Te entire atelier was finally repainted white, and Corbu, during one of his visits from New York, decided to create a large mural on the rear final wall of the corridor. Indeed, this wall played a unique role in the space and begged for special attention.

The decision to realize the Marseille housing unit, combined with the commission to design the Duval factory in St-Di é, set the office off on a new track. A wave of new people entered the

atelier. Bodiansky would lead the •gtechnology department. •h A group of Greeks completed the new staff: Candilis (architecture), Hadjidakis (engineering), Provelenghios (architecture), and Xenakis (engineering).

In the meantime, Corbu lost his New York war and returned to Paris for good. We first heard about events there in little bits and pieces. It was difficult to get a general picture. But then, all of a sudden, he decided to organize a press conference in the atelier. It was the only press conference that took place at the rue de S èvres in my four years there; Le Corbusier tended to keep the atelier off limits. But in the United Nations case he was so angry that he wanted to use as many means as possible to communicate his feelings. The conference was organized rather informally. We, the Corbu team, sat at our working tables. The guests walked around, looked at the work in progress, and chatted with some of us. Then they were invited to an area close to the entrance that had been cleared in preparation for the main meeting. Here Le Corbusier offered his report of the events. I will try to repeat it here from my notes.

After the decision that the site of the newly founded United Nations would be located in New York on a plot of land overlooking the East River, the members of the United Nations embarked on a series of discussions about what the building itself should look like. The delegations of the member countries invited their most prominent architects, Le Corbusier among them, to serve as advisors. Thus an architectural superteam backed up the diplomats and politicians at the conference table, a team encompassing the architectural elite of the period. Simultaneously a technical committee was created to carry out the task. But what was the task? In Corbu's mind it was the conceptualization of the plan of the building and then the creation of a proper design proposal.

Difficulties emerged at the first meetings. With the participation of so many individuals holding their own architectural banners aloft, there was no hope of reaching a peaceful agreement. A professional competition among the advisors was decided upon. The technical committee remained outside this melee among the great ones. When the competition was announced, Corbu asked that Bodiansky, the engineer, also be invited. The request was granted. Bodiansky joined Le Corbusier in New York.

Le Corbusier won the competition through Oscar Niemeyer, representing Brazil, submitted a project somewhat similar to Corbu's. They decided to join forces for the further development and execution of the buildings. There was no doubt in Corbu's mind that he had •ghooked •h a superb job. But then the technical committee, created to carry out the demands of the United Nations, emerged as another factor! The council had, as a result of the competition, produced a project. Now the technical committee took over its implementation. But whose project was it really? Le Corbusier's? The council's? Herein lay the dilemma. In terms of its architectural creator, there was no doubt that the project was Corbu's. But administratively, legally, it belonged to the United Nations. The fact that the technical committee was headed by an architect of considerable renown in the United States (Wallace Harrison, who, on top of everything else, happened to have some family contacts with the donors of the valuable plot of land the buildings would be built upon, the Rockefellers) did not help matters. Whatever the explanation, the project was, as Corbu put it, •gpinched •h from him and passed along to Harrison. Thus Le Corbusier claimed that for the second time in his life he was cheated out of work by an international organization. In 1928, it was the League of Nations in Geneva. Now it was the United Nations in New York. In the first case, his project was fraudulently discarded; in the second, it was accepted and then given to

another architect. Which was worse? To have one's work discarded or to see it destroyed by an architect incapable of handling it as the author himself could have?

Corbu adopted various tactics for dealing with his customers. The case of La Rochelle-Pallice, for example, represented an approach very different from that toward the United Nations.

I took over the project from Gerald Hanning and worked on it with Corbu as a sort of job capain. When it came time to contact the client in La Rochelle, we had Andr é Wogensky do it. Later on I began commuting there myself. Never in my time did Corbu take the trouble to go there in person. At the time for the final presentation, we expected Corbu to go to La Rochelle personally and do the presentation himself or at least to himself or at least to honor the client with his presence. But Le Corbusier decided not to go. The task of introducing the project to the mayor and the city council went to me. I was not eager to do it at all. Granted, I knew Le Corbusier's philosophy. I also knew the project well, and I was known to quite a few city officials; but I was not French, and my spoken French revealed that I was not a native. I was recognizably un m ét ème a bloody foreigner. Corbu himself was a naturalized Swiss (French Swiss, indeed, but still Swiss). The meeting took place in the city hall, a beautiful old h ôtel particular converted into offices. I did my job as well as I could. Then the mayor took the floor: Sir, what you propose might perhaps be possible in the country of your master (Monsieur votre patron). It might perhaps be possible in your own country incidentally, I do not happen to know where you are from. But it is not possible in La Rochelle. I thank you very kindly for your presentation. •h Period. I personally suspected that Le Corbusier was quite aware of the danger involved and, guessing what the result of the meeing would be, decided to spare himself a few unpleasant moments. He accepted the defeat with no comment.

I want, however, to finish the city of Richelieu's story on a more cheerful note. One day, at the very beginning of my participation in the La Rochelle study, Corbu left me with some sketches and then disappeared for an extended weekend. Left alone, I put my whole inexperienced sensibility into the interpretation of his ideas. A few days later, Le Corbusier returned. As usual he went from project to project, from table to table. He finally reached the La Rochelle table with the rendering of his last concept. He leaned on the table, looked carefully at the drawing, and then exploded: Et qu'est-ce que c'est ce Tchaikovsky-la? (And what is this Tchaikovsky here?). In this way I learned at the same time that he was not fond of Tchaikovsky and that he did not appreciate my so very sensitive rendering of his concept. He snatched a piece of tracing paper, slammed it down on top of the Tchaikovsky study, grabbed a charcoal stub, and started sketching. He searched for the basic principles, no jitters, no fiddling about, no swooning in subtleties. Corbu could not have expressed his opinion more tersely. The Tchaikovsky phrase will remain with me forever.

At the rue de S évres, the intensity of the work grew. More and more help was needed. Everybody had to work full time now, with payment or without. The unsalaried personnel were still plentiful. These were stagiaires: young architects who wanted to work for Corbu and were willing to do it for nothing. They were either equipped with a grant or scholarship from their respective countries or were wealthy enough to be there without remuneration. These collaborators often caused problems. Some of them joined the atelier in full cognizance of what it represented. Some came simply because they had heard vaguely about Corbu and believed that his name, though controversial, would do no harm appearing on their curriculum vitae. Still others came simply because they wanted to stay in Paris and our office might be helpful in extending a visa. The last

group was the most dangerous. They were of course advised that they were expected to do serious work. Room in the atelier was scarce; each station had to produce. The newcomers listened, accepted the conditions, and after a few days of work, began to cultivate absenteeism. Then came the unpleasant moment of firing, a task often assigned to me, since with my ability to manage several languages I could convey the news to the delinquent in his or her native language, which somehow sweetened the pill. In this way, I became the atelier's bouncer.

For Corbu himself, the unpaid labor force represented yet another problem related to his personality and character. He was very careful about money. He was also very concerned with the atelier's productivity and with his own economy of time and effort, not for financial reasons but simply because he was so full of ideas, he personally wanted to do so much, that he dreaded the waste of his own time. Long discussions of projects were wasteful and to be avoided, but with a large number of collaborators it was not easy. Thus Corbu tried to reduce the number of discussants by dealing only with job captains. He expected this to increase the productivity of the lower ranks they were never to be disturbed. The work should continue uninterrupted. His own presence at the drafting table should not be considered a pretext to stop, to listen, to watch. He wanted to limit his own time involvement to brief verifications and instructions given only to the chiefs. But every now and again a discussion between him and a job captain developed. It was unavoidable. Heads at the neighboring tables then started to turn, eavesdropping began, peeping Toms started gathering around, counting on Le Corbusier's myopia. Soon enough he would erupt with a sermon about the difficulty of running a large office, financial pressures, feelings of responsibility that should be shared by the whole team.

As far as the devotion to work and tis quality go, he was infinitely demanding. Il faut coucher avec l'architecture, he said you must take architecture to bed. It was his way of saying that it takes time and love to deal with architecture. But financial pressures really did exist, not so much, I believe, because Corbu himself was badly paid by his clients as because with all his thriftiness he was lavish in spending money on work: on research, on renderings, and on presentations. Often, however, Corbu could be generous and thoughtful to his collaborators in a most charming way.

It was the very end of December 1946. My wife had just had a baby. At this time we moved from the room the Wogensckys were graciously lending us on the rue de Tolbiac to a studio loaned by a relative on the boulevard St.-Germain. A strange situation developed. Here we were like church mice, underfed and without money, residing in one of the most luxurious urban settings in the world. We were one block from the Chambre des D éput és and the Seine with a good view of the place de la Concorde. My wife had just been driven, with the little one, from the Maternit é Baudelocque to our new home. It was New Year's Eve. Limousines swished along the boulevard St.-Germain to and from the Concorde. Evening dress, white and black ties, glimmered as they passed. We had hardly any food at home. The doorbell rang. It was the house superintendent with a huge parcel. A gentleman has just left it for you. We opned the package. It was full of holiday goodies along with a magnum of Champagne and a large rooster a folklore symbol from the south France made of paper-m âch é and polychromed in resplendent colors. A small card read, From Yvonne and Corbu. A little checking with the superintendent established the identity of the bearer. Le Corbusier had brought the parcel himself.
(ARE YOU CRYING? YOU SHOULD...)
on the other hand, he helped me in meeting people outside the atelier group and his domestic regulars. In my free time Saturday afternoons (Saturday mornings we still worked regularly),

Sundays, and holidays, sometimes even on workdays in the evening I did some visual dabbling myself. Every now and then I shoed what I did to Le Corbusier. He was always appreciative and encouraging; he once grunted something about how little of this type of involvement existed among contemporary architecs and how one could see the consequences of that in their works. But he seldom came out with real criticism. Ah, you should show this to L éger, he would say, and that to Brancusi, he would be pleased. Then, lo and behold, he started arranging appointments for me with these generally inaccessible friends of his. He even checked on the results of these appointments. And how did it go with Fernand? And what did Brancusi say?

Le Corbusier held an infinitely high opinion of Picasso. One evening, after dinner in his studio, Corbu showed me his last personal work. A discussion developed, the name of Picasso popped up; I was somehow comparing his role in the contemporary visual world and contemporary culture with Le Corbusier's, and Corbu interrupted: •gMais mon cher Soltan, Picasso c'est un g énie et moi.... •h I left for home that night with particularly warm feelings towards my host.

Sometime later, on the occasion of another evening at Corbu's home and after the guests dispersed, Mme. Le Corbusier grabbed my sleeve and pulled me away to a corner. Mais dites donc, Soltan, Corbu c'est un grand bonhomme, n'est-ce pas? She felt uncertain and was, in fact, full of doubt. I tried to convince her as well as I could that her Corbu was really quite a guy !

Le Corbusier was not lavish in quoting the great of the world, whether living or dead. Among the latter, however, a man he deeply admired was the Renaissance painter Piero Della Francesca. In our talks his name came up several times, particularly in relation to the different systems of regulating lines and hence to the Modulor. I tried to squeeze from Corbu as much as I could about his opinions of his own former architectural bosses. He did not seem to have been enchanted with them; thus he was less communicative than usual. One day we were discussing the pilotis, the columns that supported the Marseille building. It was a complex problem, as they had not only to support the whole structure but also to serve as shafts for all the utilities, water and sewer pipes, and so on. Corbu made a most unorthodox and unexpected proposal. I protested: But M. Le Corbusier, it is impossible to do that. Corbu shot back: Mon cher Soltan, Peter Behrens disait toujours, and then changed his voice to imitate Behrens: In architektur ist alles m öglich, and he banged the table with his fist. In this way I learned that Corbu's german was excellent, that he kept alive his memories of the Behrens times, and that, sometimes, he did not exclude the possibility of raping (a little) the virtue of architectural chastity.

And as for his contemporaries.....

It was evening, after work. The atelier was empty. Under a meager light, Le Corbusier perused a new publication on contemporary, ultramodern architecture. Behind him stood two of his main acolytes of the period, Andr é Wogenscky and myself. The book (I wish I could remember precisely what it was) encompassed the most important modernistic works from all over the world. Corbu thumbed slowly through the pages. He grunted. With his grunts he expressed more and more clearly his dissatisfaction. Finally he exploded: C'est moche, ça! (It s ugly, this stuff!). And then Wogenscky, in his implacable, puritan loyalty to the modern: Oui, Monsieur Le Corbusier, mais ce sont des fr ères. Le Courbusier listened, remained frozen for a moment, then banged the book shut. Oui, vous avez raison. Then he stood up and left. I remained alone in the dark atelier that evening to ponder this scene. I was quite pleased with this condemnation of what Corbu somehow I then did not know how came to be called the International Style with Corbu even considered a leading force in it. I find in ironic that I joined Corbu precisely because in my mind he was not part of it!

The Modulor study moved forward quickly after Corbu settled on the six-foot-tall human specimen on which it would be based. The last version of computations was done, and I soon traced the first Modulor tape, which we copied and distributed in the atelier. Corbu cheerfully carried one copy of the tape in his pocket. Everybody in the atelier started using it. And then Modulor clashes began to occur. Le Corbusier would ask somebody in relation to a project, How did you get to this proposal? The Modulor suggested it, ran the answer. Corbu would find the solution wrong and change it. The number of similar cases grew. The Modulor argument reappeared more and more frequently. Corbu s reactions became more and more hostile. Finally, one day he became furious. He ordered the use of both the tape and the numbers reaching beyond the tape stopped. They prevented their users from clear thinking and feeling. They easily became a sort of panacea for all architectural illnesses, a substitute for logic and imagination. Yes, the Modulor could be used, but rather as a corrector of ideas, as a means to reach for perfection but not as an initiator of ideas among those incapable of conceiving them.

Sometime in autumn 1948, I decided that the time had come for me to think about leaving Corbu. The timing was not good. New things were brewing in the atelier. The Dominicans Couturier and Regamey were appearing on the horizon. It might mean some work for Corbu. This work materialized later in the form of the chapel of Ronchamp, the monastery at Eveux, eventually even the church at Firminy. Gautham Sarabhai came from India to visit the atelier. The result of this visit was Corbu s involvement in projects and realizations of buildings in Ahmedabad. People capable of working with Corbu were in demand. At this moment Roger Aujame was brought over from Marseille to lead the team of the difficult La Plata-Currutchet project.

The financial situation of the atelier, however, changed little. Aside from occasional moonlighting, I did short periods of full-time work with other architects. To help me out financially, Corbu threw some writing my way. Consequently, I became acquainted with publishers interested in him and his ideas and in new ideas in general. I observed that Corbu did the same with some of his other close collaborators. The decision that I would leave the atelier was made in the little Modulor cube (7 5) office at the rue de S èvres. The gist of the decision as spelled out by Corbu: It is in the nature of life that things change. After four years with him, it was time for me to bring something new into my life. Best of luck, moncher Soltan. As always, when the matter was serious, I was deeply moved by Corbu s directness, simplicity, and warmth. The last day of July 1949, I left the atelier exactly four years after I had entered it.

I saw Corbu for the last time in 1965, on the eve of his departure from Paris for his customary August vacation. By that time, his wife had already passed away. I visited him at the atelier. The scared rhythm of his day had by then changed considerably. Indeed, now it was reversed. Corbu spent the mornings at the rue de S èvres and was too tired in the afternoons to move around much. But one felt that he did not want to admit any major changes in his life. He knew, and everyone around him knew, that his heart was in bad shape.

From the atelier, we took a taxi to his home, at rue Nungesser-et-Coli. We had lunch there. Corbu offered me a drink. The sun was resplendent on the terraces. All sorts of plants were in bloom. Far away, Mont Valerian was vibrating in the summer heat; nearby, bees and flies buzzed around their heads. What will you have? Something light. Perhaps a Dubonnet. And you? Corbu poured himself a double pastis, hardly taking any water. It is a deadly beverage, and I protested mildly. Corbu dismissed my grumbling. He was smiling but serious. As long as he was alive he would not

allow himself to be pampered. As long as you live, live with gusto! After luncheon, however, he weakened visibly. Yes, he thought he would lie down. A Mediterranean siesta nothing more. Kindly, but firmly, he saw me off.

A few weeks later, I learned about his death at Cap Martin-Roquebrune.