Jose Laborda Yneva

UNDERSTANDING ARCHITECTURE

Banksterbooks

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José Laborda-Yneva and John Francis Kinsella
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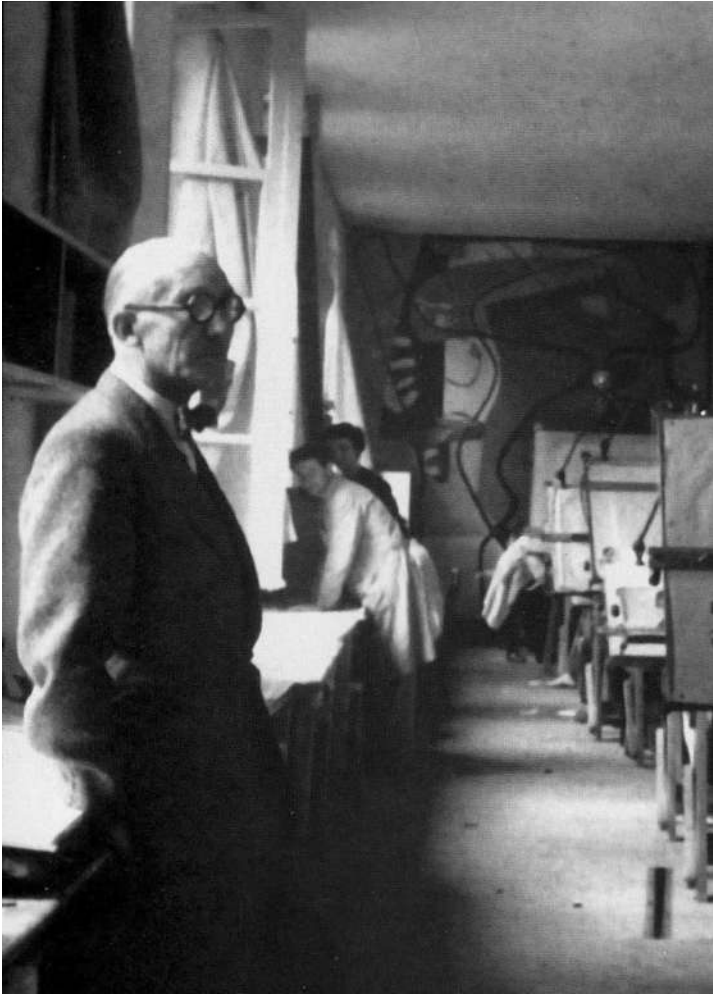of *Understanding Architecture*
in San Sebastian Spain

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but the objective still remains the same.
Le Corbusier in his Studio in Paris

José Laborda Yneva

INTRODUCTION

The transmission of knowledge has been and still is one of the most important characteristics of all human behaviour. As generations succeed each other, the difference in their experience and their degree of knowledge is the result of a continuous flow of information, which requires a means having a demonstrable efficiency.

These means consist of teaching and methodically adding to the information that is transmitted. In our specific case architecture certainly forms part of that knowledge, and no doubt requires method and originality in order to be recognized. One might also add the need for a desire, instinct and vocation, an appeal to material or intellectual actions, in brief willingness.

As for myself, after already more than forty years since my first contact with a school of architecture, almost a lifetime, it has been only possible to discover just a small part of what there is to be known. Certainly things are now different to what they were then, but the objective still remains the same [01]. Moreover, it is almost certain that those who were students in the sixties

02. We feel that we can better chose amongst the many things before us.
Josef Albers with his students

like myself, discover that each time we undertake a new work in architecture the greater the interest we have in it. We recognize things that have a greater potential for originality than ever before and we feel that we can better choose amongst the many things before us [02].

My generation is of course no stranger to the profound evolution in architecture that has taken place over the past forty years, on the other hand we can see, with at times surprise and amusement, the ways in which contemporary architecture has adapted and has been adapted by observing the different ways it has expressed itself over the last century.

Architecture as a visual encounter possesses the undeniable merit of having an aesthetic goal, but this is a secondary consideration that can only be examined when the art is better understood. The risk of continuing in this direction means experimenting without entering into the heart of the matter and thus becoming lost in a vacuum. Architecture should not be taught in this way and it is the obligation of all teachers to inform serious students of the dangers of such an approach. Perhaps this is why the following discussion will be somewhat subjective, because after all, each one of us has his own particular way of explaining his art.

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03. A single teacher, who understands the importance of the pace in learning, the relationship of his students towards it.
Frank-Lloyd Wright with his students

TEACHING AND LEARNING

Any apprenticeship, including that of architecture, needs as a principal the explanation of non-specific issues, validated by addressing the relevant references. A little later, when we have become acquainted with the method, we can get more involved in learning architecture, as we intend to do. For the moment, we can agree that perhaps the concept of *learning* is much more far-reaching than that of *teaching*. Teaching techniques are so often overtaken by events that no one could have imagined, let alone explain, how therefore could learning be accomplished unaided. It seems possible, of course, to say that in any learning process, method together with opportunity can obtain better results than through any other means. But we are already aware of the principle whereby the sum of the different elements involved in learning require a further condition, the will to learn, because anyone who is unwilling to learn cannot learn, there must therefore be a willingness to do so. And perhaps, if we are to find the reason for things, we could say that this will is a preamble to the approach and the approach is a prelude to the act of learning. We must therefore incorporate this third component, will, which is essential for any approach to learning, this is a personal contribution that cannot be transmitted and

04. However, where can we find in our time
teachers and such students?
Luis Moya-Blanco, 1904-1990

without it, neither method nor opportunity can function.

Perhaps architecture is one of the most evocative attitudes of man vis-à-vis himself. Architecture links behaviour, transformation, proportion and appearance, and each of these concepts offer immense opportunities for teaching and learning. In architecture there exist methodological components: approach, transformation, correlation and action, and each of theses concepts offer immense possibilities for teaching and learning. How do you teach architecture? Surely we can agree that it is much easier to learn architecture than to teach it. Especially when we know that architecture has existed for more than six thousand years. How can we teach something that is visible to everyone?

Maybe that is why, with prudence, we can insist on assuming that teaching architecture is before anything else a question of organisation, one might say the organisation of ideas. Since it is not entirely necessary to teach what everyone can see, we can suggest a timely order of looking at things[*], we can propose a way of

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[*] It has seemed to me useful to add to this brief essay a number of pictures so as to suggestive of different ideas. The expressive capacity that any illustration transmits includes its capacity to understand one or another form of a same text. Thus, at times, the pictures contained in this book capture, as generic references, the portraits of certain masters of the art, historical personalities indispensable for the training of architects who were young during the early seventies. At other moments they corresponding to the texts, adding hoped for clarity with an appropriate site. Others could at times produce more abstract results, more relative or circumstantial, chosen with different goals in mind, capable of evoking distinctive conclusions so as to draw the attention or interest of the reader. Others were more lucid and deliberate, adding a

looking and relating to things, establishing degrees of intensity when we look at things, so that little by little we can determine the criteria necessary, in this way what is seen is what architecture proposes and not the contrary. This same method will inevitably to lead us to originality, the indispensable opportunity required to extend knowledge through this specific relationship. And it will be our own approach towards teaching which will reinforce the will of those wishing to learn; the logic of the approach.

There is, of course, a primary disadvantage in this particular method of approaching the study of architecture. Because, seen from this point of view, it is though such an approach is the vision of a single teacher: a teacher who knows what is to be taught, how to employ a method, knowing its limits, who has sufficient resources to encourage a broader outlook and a realistic method that can stimulate the enthusiasm of the student. It is not easy to avoid this, everything we accumulate, methods and attitudes obtained from our first experience, we transform into our own, using them with pleasure, verifying with satisfaction our common points, and those who study architecture, or anything else, will certainly develop the feeling of being part of a family. But, from this, to share the same gestures or speak with same voice there is a noticeable difference;

less conventional component to an excessively specialized account. I have also included some more personal pictures, images that for one or other reason suppose one or another recollection with an especially worthy result for which, many years after, this book has been able to be written.

04. However, where can we find in our time teachers
and such students?
Luis Moya-Blanco, 1904-1990

teaching should be put into perspective so as to enable students to express their own feelings. It is therefore essential to have the simultaneous or intermittent participation of the teacher, the student should be able to choose what is suitable in each case, and the teacher must always dispense his knowledge. But should this limit teaching? Should the teacher limit part of what he can teach in order to avoid undue influence? Both approaches are acceptable, however, the full involvement of a number of teachers, each with his own specific knowledge and ideas, and whose successive influences permit the student to draw the information that most suits his needs. Which is the most suitable, a simultaneous or intermittent teaching approach? Who therefore is allowed to specify the order?

It is different when a student has learnt something; he is capable of fixing the criteria in his choice of teacher. It is a conscious choice, a voluntary process which leads the student to take the most appropriate initiative; it is the moment of truth. The history of knowledge, in architecture or any other essential discipline, is filled with examples of teachers and their students. Both agree over a certain period of time: a few years, months, days, hours, moments, and this meeting of minds results in the student's future orientation, and at times that of the teacher's. Because teachers can learn from their own students, it is they who add degrees to the knowledge of those who teach, who support or question the ways of seeing or observing what is presented to them; teachers are always rewarded by the enriching

act of teaching those who seek to learn. The question is: where in our times can we find teachers and such students? [04]

Certainly the architecture is an attitude towards life, a concept of living; we could go into it deeply, analyzing the implications without taking the time to examine its constructive components: but this would be a huge error. Because, those who learn do so to build, and by steps that add to architectural theory, so that theory is necessary to ensure that these steps are of value. Further, circumstances remind us that today's teaching methods are subject to the system that surrounds us. Nowadays, it is almost inconceivable to learn for learning's sake, one learns to be able to practice what is learned. Therefore, those who consider architecture primarily as an intellectual expression, should be prudent when we suggest in addition the will and desire to practise it[*]: we may give the impression that the essence, the motivation, clouds the circumstances, the purpose. It could be said that today there is a growing tendency to avoid considering the quality of architecture as art, a quality

[*]Over time the memories of my teacher Don Luis Moya have been transformed into some of the most lasting from my years at the School of Architecture. Since then I have got to know many good architects, equally from the point of view of theory and practice, but none have succeeded as Moya in transmitting to me a comparable lucidity in their works. There was in him an encyclopedia of exceptional intellectual and personal harmony that made him a unique individual: his mind was capable of relating to things both far and near, immediately establishing surprising relationships or differences always based on extraordinary rationality. Moya knew what was possible and necessary to know.

that gives continuity a purpose. In our contrasting times, quality in architecture is something else, supposedly linked to the unusual, the unexpected, and is closer to experimentation than invention, which seems to be the current concept of architecture as an art form. But we should not ignore the fact that it would be impossible to live in a world full of architects who were for the most part artists and whose works were necessarily artistic. Therefore, something is failing in current teaching methods of architecture when, promotion after promotion, a considerable number of architects believe themselves to be capable, after just a few years of learning, of being able to astonish the world with the originality of their works.

Certain transmit this idea to the future generation of architects, without perhaps integrating the idea that the intellectual quality of architecture does not necessarily need the unusual, or that it be considered as art; it is maybe so, but without this art form necessarily conforming to the concept. Nobody should be disillusioned by this idea; it is like giving every word a meaning, which has nothing to do with expressing art, there is no possibility of disillusionment for those whose guidance is coherent, especially when the information received on the subject is sincere. Can it be possible then that teachers are not entirely truthful when they transmit the notion to their students that their skills have a propensity towards genius? Does it consciously subvert the reality of things? Not at all, to them their teacher is part of a non-existent reality.

In reality experience is the only real contribution we can offer to those who assume the art of architecture lies in the quality of its purpose rather than the motion. But what does society want? It is not certain, with on the one hand desire and on the other refusal. Everybody considers themselves as experts, recognising perhaps the value of experience but considering at the same time, any suggestion that could pose the slightest difference to a decision already taken as reactionary, arrogant and intolerable. Society demands experience from those who undertake work, whatever it is, but persistently multiplies inexperienced actions, undertaken precisely by those who should be custodians of the highest degree of experience: those who undertake public works, for example.

How can architecture be an exception to this situation when, as everyone knows, architecture is a consequence of the society in which it is present? However, it is not easy to teach architecture today employing originality and vocation. There is in the contemporary process a high arbitrary component that in fact prevents an orderly structure in the learning process. Even formal education provided by universities is often arbitrary. But real knowledge is something different; it does not depend on formal education [05] everyone should have their own project for learning and pursuing it with the all the means they have at their disposal, not only at university, and continuing to do so many years after graduation.

06. And then look for, with a little chance, teachers capable of
transmitting what is desired.
Francisco- Javier Sáenz Oíza, 1918-2000

Students, whoever they are, should at first learn as much as possible, then after much study, specialize.

Finally we have reached a logical conclusion: *teaching* architecture today is almost impossible. What does seem possible is *learning* architecture, but to do so each must find his or her own way, through originality and stimulation. And then look for, with a little chance, teachers capable of transmitting what is desired [06]. The approach of these teachers should be anticipative since no one is going to ask for their professional or teaching experience. Except in isolated cases, they should follow the lead of their future followers and remain on the margin of formal education, knowing beforehand that their *specialty* as an expert may be totally obsolete. Or, if they wish to be involved in teaching, transform themselves into specialists in *specialization*. And then in the hypothetical case of one who has the authority, include in the teaching program a discipline that may have nothing to do with specialization.

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07. History has to offer, from the earliest times until well into the eighteenth century, a continuous curve of empirical learning.
Roman des Girart de Rousillon, *Work in construction*, 1460

José Laborda Yneva

HISTORY

W e have progressed a little along the natural path of teaching architecture: the teacher and specialization. Perhaps this beginning has been somewhat abstract, however, to provide an accurate image on the real state of things, it may be appropriate to say that since architecture is the consequence of man's intelligent efforts, its teaching has been the object of individual ideas, reciprocity and passion, practised by both teachers and students. Specialization is something recent and even though we have already seen that education today is not possible in another form, perhaps we can add some new nuances by looking at history. In this way we can perhaps discover something of value in our quest for a suitable approach to teaching architecture.

Thus we can discover what history has to offer. From the earliest times until well into the eighteenth century there has been a continuous curve of empirical learning [07], continuity in the oral tradition of passing from one generation to another the techniques and secrets of the art. The exercise of architecture commences with some kind of an apprenticeship, the gathering information and repetition of tasks, first simple and then progressively complex. Above all the acquisition of

experience, and everyone knows that experience is simply the result of intelligent effort. Therefore, in at a time when information was not abundant and the possibilities of going in search of it were few, the relationship between teachers and apprentices was almost a ritual. It was therefore normal that the process of transmission of knowledge was in a manner of speaking an extremely narrow relationship, one of almost total dependence, almost a form of adoption by teachers of their young students. Thus, through this relationship came the ability of teachers to teach and students to learn, and naturally the quality of the result. The continuity in the education provided by a teacher corresponded to the student's progress in learning. In both cases, the quality depended on the conditions and the rhythm of each.

Later, after having surpassed their first teachers, students once initiated could set themselves up on their own interrupting their studies, or continuing as assistants to other teachers with a greater disposition, or commence as teachers at the lowest level. They started very young, barely fourteen years old, qualifying some ten years later. They were introduced to practice and theory – in this order – construction techniques on the one hand, and design and the preparation of plans on the other. However, there were significant differences depending on whether the teacher was a builder or designer, despite the fact that both domains converged to a greater or lesser extent according to how architecture was then practised. Thus those who wished to learn, sought

08. Access to the qualification of architect was regulated
by the academy.
Claude Perrault, frontpiece for _d'Architecture de Vitruve_, 1673

teachers according to their inclination, and often the choice was very broad. Undoubtedly chance played an important role in their success, partly due to contacts, where they lived or their kinships, which were the only possible openings available for students forced to avail themselves of what was at hand. The opposite was exceptional, it was not easy or normal to be accepted by good teachers, we should not forget that architecture as a profession was always a manual profession, unsuitable for the upper classes, which were certainly the only ones to whom a choice would have been possible. Moreover, apprenticeship was a form of servitude as any other; professionals were not necessarily experts in teaching, but needed helpers, accepting young people as their assistants in exchange for material help, dependency. No teacher devoted his time to teaching for the pleasure of it.

It was therefore natural that the teaching of architecture from the outset probably included a large component that was limited to the initiated, as its form was composed of an overlap between practice and theory: today we see architects as people who plan and supervise but do not build, which is something very recent. The old masters had to take competition into account and jealously guarded their secrets and the sources they had managed to gather through their own efforts, only transmitting them to those who they judged merited them.

Moreover, the difficulty in exchanging ideas added value to new designs. It was only with the invention of printing and dissemination of knowledge that the first

09. Meanwhile, the great academic architects remained *non-specialized*, architecture for them was unique and indivisible.
Juan de Villanueva, The Prado, Madrid, 1785

steps towards transparency in the art of teaching and learning architecture took place, growing as structured guilds advanced in number and influence. At the same time, the proliferation of practical geometry and manuals, together with more speculative treaties, added theoretical and technical elements to the graphical repertory. The progress of information was one of the key factors at the beginning of the transformation of the methods exercised in architectural teaching.

Nearly two hundred years passed in the development of this process, with the growth of absolutist attitudes of European monarchies and the desire of kings to *possess* their own architects, giving way to a new *caste* consisting of the best and relegating the others to mere artisan status. Only the most competent had the possibility of providing education and ensuring the continuity of the art. Thus the craft gave birth to a new branch, somewhere between the courtesan and the professional, which made the teaching of architecture an elitist subject and a matter for the academies of fine arts. Naturally, practical and empirical teaching continued within guilds, but official teaching both by way of the profession and institutions as well as access to the qualification of architect was regulated by academies [08]. From this pointy everything changed, that is to say became specialized.

From about the second half of the eighteenth century, the close relationship between teachers and students slowly became less important. Architecture could no longer be learned anywhere, the academy was

the repository of knowledge and authority. Students attended classes in groups, far away from direct contact with practicing architects or master builders. Passing from one class to another, many of them did not continue as apprentices, barely completing the necessary practical work, advancing in classes according to their merits and often participating in competitions, which were aimed, above all, at demonstrating the efficiency of the system. This was perhaps it was the beginning of specialization, even though it was not applied during work, and teaching was divided into different matters considered as gradual steps for necessary for the purposes of learning. Meanwhile, the great academic architects remained *non-specialized*, architecture for them was unique and indivisible [09], as it was for Villanueva, for example.

Things continued like this for a few hundred years until, throughout Europe, the growing complexity of the practical programs and construction processes transformed formal teaching into the first schools of architecture, more or less as we have known them until recent times. Thus, from the second half of the nineteenth century, the advance of technology and the different types of buildings made architecture and its study an unexpectedly complex process for many architects, including academics. Engineers were on the other hand much better prepared to affront more specialized technical needs, transforming their recently developed profession into a model of method and efficiency, which soon incorporated architects. Without losing their

capacity for invention, Wagner and Mackintosh were examples of this approach – and perhaps vision. In the same way, architects such as Gaudi, with his huge capacity for invention, could be seen as essentially visionaries. The teaching of architecture then continued its path towards specialization without losing its relationship with teaching. However, there were few teachers and few places to learn, students were equally few and it was natural that some succeeded in forging intellectual links and teaching prevailed over specialization. Already in the twentieth century with the momentous effects of the Great War and the changes in society, the development of consumerism and the growing capacity of mass production offered new means for practicing and teaching architecture. The Bauhaus model and the consolidation of the *modern movement* transformed the nineteenth century style of rhetoric into reason at the service of society. And again teaching manifested itself as an exciting option, indispensable and contrasting in its complete and future form: distinctive workshops, progressive ideas, the possibility of comparison with other disciplines, of different teachers and the exchange of ideas between students in search of a common goal. It was the meeting of teachers capable of transmitting by method and vision new worlds, at the same time both complementary and specialized.

This could no doubt be considered as the crowning moment of architectural education, everything naturally converged towards it, there was a need to move towards it through concepts of *composition*, *form*, *colour*, *light*,

plastics and *material*. Architecture arose as a natural consequence of vision, function and creativity – which we have spoken of – linked with its own epoch and with the intellectual stimulus that succeeded in transforming it into an art that was complete, vibrant and natural. It was an all embracing vision, from conception down to the smallest detail. Until recently, it could seem, the influence of the Bauhaus, its methods and its attitude, profoundly inspired the role of teachers and students during the middle of the twentieth century [10]. It had a surprising effect; for the first time disseminating images, texts and ideas during the few years Bauhaus exercised its influence, weighing on the thoughts and ideas of several generations of architects. Until this point its teaching was modern[*]. Many architects, even without

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[*]Hardly fifty years have passed since the teaching of architecture opted for a transformation of it all embracing character, a unique form in which everything tended to towards an expression built from intellectual motivation, in a growing accumulation of factors both formal and circumstantial, capable of accepting almost any proposition independent of its viability. Since then, the indispensable exercise of creativity has assisted in the incorporation of an intense progression of support systems, suggestive and exciting at times, capable of watching over its own condition of complimentary stimulation to the point of transforming it to meet its own needs. Systems for construction, application and interconnection of materials have opted for selecting suitable solutions based on the same logical intellectual process, which has tended towards indifference relative to the viability of the solutions envisaged. Surely the conviction that changeability of present times lacks the motivations necessary for creative works to transcend their own time, advocating contemporary society progresses through consumerism not only in material things, but also in the domain reserved for abstract creativity. It is therefore

having known the German masters, without having felt the effects of war, far from Germany, and of course many years after that school closed, became its disciples and spread its values. Thus were the last masters of the twentieth century, our own teachers. From those we learnt the values and the need for the art. All of our teachers are now dead, and time has replaced their masterly skills by a form of *conventional specialization*, in keeping with out times.

Today schools of architecture overflow with students, teachers abound, the majority of them handle many things at the same time, hanging onto everything that is published, which hardly contributes to establishing a stable relationship between those who learn and those who teach and for the development of an in depth knowledge. How is it possible to find teachers for these students when neither they nor their teachers know how to take a moment's pause for reflection?

But this is of course natural, it is part of modern society's method of adding more consumption to consumption. Thus, with rare exceptions in certain schools of architecture, the teaching of modern architecture is nurtured by raising a succession of obstacles, including in curriculum explicit methods on how to bypass them. But knowledge is something else,

natural that together with the tendency it induces, the transmission of knowledge in certain domains – including architecture – adds to its methods a component of progressive instability that inevitably passes through teaching and method. It is in effect a new way of teaching, both extensive and accepted.

10. The influence of the Bauhaus, its methods profoundly inspired the role of
teachers and students during the middle of the twentieth century.
Herbert Bayer, with the first number of *bauhaus*, 1928.

not only knowing where to look, but also method, which will no doubt be the same as that always used by those in the past.

Perhaps the only thing that remains intact in learning architecture is instinct, the objectivity encountered when transforming a concept into a concrete form. On the other hand there is a risk in present day methods: teaching students of architecture that speed and fashion are trends of the future; the dissemination of confusion, at a time when information dominates everything, techniques, transportability, and the unavoidable use of IT systems, which have completely transformed methods, expression, education and the practice of architecture.

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11. Because it is the way of looking at things that distinguishes this from others things present in the broad panorama of architecture.
Fortunato Duranti, *View of Rome*

LOOKING & OBSERVING

We have briefly reviewed the essential overlapping themes concerning the teaching and study of architecture. However, addressing themes and briefly noting the historic background of teachers and students in order to trace the lines of present day circumstances only outlines the general idea, we must now go deeper into the subject in order to characterize our approach, which is essentially learning first, then, if necessary, specializing should the need arise. What therefore is the training required for those wishing to acquire an understanding of architecture? There are many secrets, which can be summed up through teaching and learning how to look and observe. Because it is the way of looking at things that distinguishes this from others things present in the broad panorama of architecture [11]. Perhaps this may seem abstract? How can we *look*? We could compare it to those who feel music when they listen to it.

There is a multitude of ways of looking at the same thing, what one sees depends on the way in which it is looked at, which determines the idea before or after observation. For example, when we look at a landscape through a window, we could also see the surface of the

window pane without looking at the scenery beyond it, or perhaps, we see the how the framework on the window relates to wall in which it is fixed, or the handles of the window, or the landscape in relation to its overlapping planes, or any point that may attract the observers attention, or perhaps, the specks of dust hanging in the air before the glass when the light passes through them, without considering the landscape. It is a question of approach. But before anything else there is the need for focus, an indispensable choice, or perhaps putting an order into the way in which things should be looked at. All this depends on how things are observed and the criteria used. In observation there is always, at the very least, a why and how. Above all there is a how. It is not easy to explain this, or explain how musicians hear after listening. But this is precisely a question of training; learning to see what is seen, learning to hear what is heard.

There is a long process in learning to look in order to see, but one kind of learning is by no means different from any other[*]. It is the goal that counts, wanting to

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[*]In fact learning something should have its base in prior information, according to the interest of the person concerned by it. Learning how to look is only possible when taking into account that what is within our vision is the fruit of a natural or prepared process, almost always in harmony, though at times this harmony could surpass the logic and refer to disorder. Knowing how to look can include putting into order that which is lacking; it is an independent act, directed towards the analysis of things and once achieved being capable of discerning the subjective stimulus that comes from the personal desire to know. Something that can be seen, from a tree in a park to an object, which has been created before, disposed by someone whose intellectual

learn how to look when looking at architecture – that is the question. The same happens with windows, architecture can be looked as a whole or in part; before it, after it or through it, as an observer, or, with a specific purpose in mind. Thus, whoever looks can see a complete picture or its details, full or empty, lines, planes or volumes, colours or light [12], structures or functionality. That is *what* can be seen.

It is for this reason it is necessary to progress a little in the subject and why this should be done methodically with the necessary learning steps. This implies reasons, and the reasons for looking at something are always endless and at times unfathomable. That is why it is always a premeditated almost functional act. One can look at something without a reason and immediately understand the reasons suggested by what is being looked at. That is architecture, looking at things and seeing them with purpose. We could add an order to this purpose, and each one has his own, using his own reasoning to add interest and predilection, to order or reject each one of the things seen in the subject. It forms one of the essential motivations in architecture, analyzing it, classifying it, relating to it and placing it alongside other knowns. Whoever is trained in this

objectives or functionalities are about to be discovered. We have to go deeper into it, know its motivation, find in it a coherence or lack of it, knowing how to look is always a positive intelligent act, independent of that which is being looked at. It is indispensable what is being looked at is worth being looked at. But this is a question of time, the profession of architecture is full of visions, and learning resides in the intense practice of observation.

approach will thus form his own collection of feelings through a process combining objectivity with subjectivity, where criteria become a primordial factor. And it is precisely these criteria that should be taught in developing the power of observation: rationality and cause, selection and opportunity, accommodation and convenience.

Then, after what and why, we discover *how*, depth. This is a completely different factor, something that is personal and non-transferable. How concerns originality and necessity; again the components of method are met: order, methodology, opportunity and purpose. Because any form of learning requires a certain degree of instinct, or at least ensures that propitious selection ensures originality and forms part of the process. We have often noted we are not entirely free of preconceived ideas at the moment of revelation, one is surprised by something which before being discovered could not have been imagined. There is little revelation in the surprise that architecture produces for those who know how to look at it, it is the spontaneous fit of something that people remember or the idea of being unable to classify something, something without any clear relationship, where only originality gives meaning.

Necessity acts as an essential component of depth. Careful examination allows that which has not yet been seen to be seen. It is a measured surprise, so to speak. It is not a case of fitting parts together, but verifying what is supposed to fit does in fact fit. From this springs the fascination of architecture, a fascination that borders
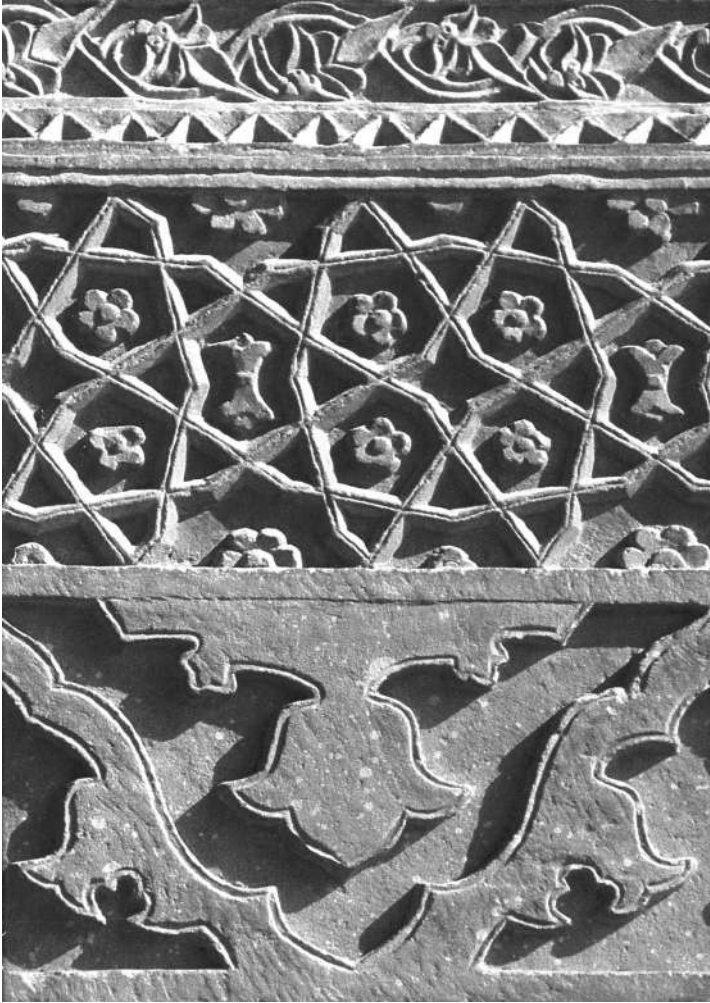
12. Thus, whoever looks can see a complete picture or its details,
full or empty, lines, planes or volumes, colours or light.
The Alhambra, Granada

13. Everything changes when we look at things in this way, things begin to sparkle, are revealed, become distinguished, be ordered.
**Koloman Moser, a textile design**

almost on joy. Things start to make sense; those who study start to learn. It is only then ideas appear that are capable of being transformed into invention, the accumulation of ideas that permit experimentation.

Finally, it is a way of looking at things. I am of the view that architecture should be seen by partly closing one's eyes, with the head a slightly tilted, looking at what you see but barely seeing it, without knowing why we are looking, and also without taking time into account. It could be said that the longer we look the less we see. Everything changes when we look at things in this way, things begin to sparkle, are revealed, become distinguished, be ordered [13], fit into place rather than be seen by necessity, by instinct, by method. It cannot be said that more things can be seen by looking with open eyes, at least in the case of architecture, things refuse to be seen when one does not blink. Seeing something is seeing what anyone can see. The patina, however, converts our regard into a non-transferable act, an act of acts. Because, when we turn our eyes, the details are in broad terms emphasised, and with the details, colours, lighting, shadows, textures, function, form, proportions, position and the site. And what is all this but space? That is architecture. The angle of observation effects the view, almost no one sees things from the same angle as his neighbour, the feeling is different, the criterion changed. Because relative to the deviation of the angle from which we look at things we see things that we did not see before and things we had already seen pass out of sight. There are endless combinations when we turn our eyes and tilt
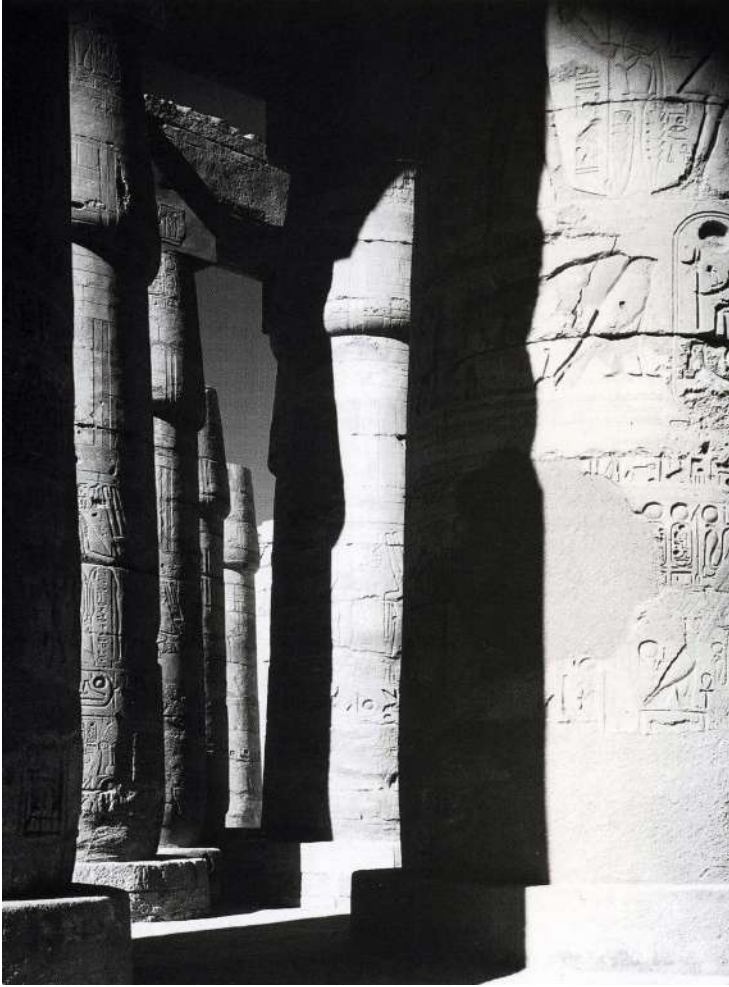
14. And, finally, whoever learns to look at architecture sees
what should be seen, that which needs seeing and
which is necessary for the pursuit of learning.
The door of the Temple of Amon, Karnak

our head in the three spatial dimensions; this technique should be taught. And, finally, whoever learns to look at architecture sees what should be seen, that which needs to be seen and which is necessary for the pursuit of learning [14]. It is the same thing when those who know how to listen to music end up by listening to what they want to hear, what needs to be heard.

Unquestionably this is what training in architecture is all about, a continuous apprenticeship in its essential criteria and the development of the faculty for surprise. Teaching architecture is teaching how to look; removing the veil that covers things in order to see clearer, that is teaching. Architecture is acquired by listening, the principles comes later. It is essential that someone explains how to see things; the instinct of those wishing to learn covers the rest. This is training, architecture cannot be learnt by correspondence, nor surely from books, or from computer screens. On this point, perhaps it is time to acknowledge the progressive influence of computer systems and programmes on information, knowledge, learning, composition and the expression of architecture, which are the five essential components of all learning, distinct forms of the same process and, of course, elements whose consequences should be addressed both separately and together.

At this point it is not necessary to go deeper into these elements. Therefore, on the subject that concerns us; teaching, we should be aware of the purely instrumental character of these systems. If we decide to use them as a support, rather than a mechanism for

substitution of the skills of our own efforts, we will be able to take advantage of the undoubted benefits of computer technology. Unfortunately, the tendency is the opposite; we are witnessing a progressive deterioration of the quality of architectural education, replaced by routines increasingly related to the absence of judgement and the required skills. Similarly, architecture is subject to a growing influence of all kinds of artificial resources that transform individual and non-transferable acts into triviality. In both cases, knowledge and expression in architecture have found ininformation technology convenient channels that produce a growing banality in results.

The computer can influence in different ways how the study of architecture is approached. Information is the first one of these ways. Undoubtedly, any form of approach is valid for those who are curious about something, computers provide access to broader worlds, real or virtual, which will surely develop the desire to copy images, show them, though perhaps without a great deal cohesion between them, their effects or authenticity. Images should be analyzed and interrelated if the objective is to benefit from them or at least collecting them without any other goal than collecting. Knowledge is something else and, of course, once assumed as an instrument, computer systems can also contribute to it. All knowledge implies a relationship between sources, non-transferable intellectual processes cannot be found by gathering information. We can thus detect the first risk in using such systems: the possibility of disseminating

15. Whoever really wants to study architecture must be aware that the
imperfect beauty of art adds its own expression to graphical value.
Weng T'ung, Bamboo, IX century

insufficiently verified criteria, the possibility of introducing errors when it is taken as a reference rather than as a tool.

In view of its impact on information and knowledge, it can also be agreed that IT systems can add benefits to the *apprenticeship* of architecture. And the conditions for this are the same as in other cases: it is subject to the form of the vehicle, a means of learning, without wishing to make it a mechanism capable of replacing the indispensable effort required as a link between concepts, nor much less making it into a template capable of developing discernment. Computers provide no standards, simply references, sources of information; education cannot be found in them, let alone the capacity for the transmission of concepts. The risk is the student, in order to complement information gathered, very quickly finds IT systems a convenient was of replacing their thinking, or at least interprets it when wanting as to progress beyond apprenticeship so as to start to visualize and sense the *composition* of space. We must examine this in more detail in order to master design in three dimensions for spatial vision. No conventional method can replace this way of seeing things, only acting as instruments to compose virtual models to demonstrate what has already been imagined. Whilst on this subject it is important to caution students in architecture on the growing risk of the intellectual limit imposed by the proliferation of simulated systems for spatial compositional.

When planimetric *expression* is used in reference to

virtual space, the student will encounter computerized procedures that once again seek to replace his expertise via a display of undifferentiated references, which limit the choice to a series of symbols without any specific prerequisites or identity. It is impossible to teach ideas in this way since architecture loses its essential graphical form and becomes merely a product of consumption. These are means of support, incomplete, and students must continually safeguard the prerogative of their own self-expression, despite the fact that some will argue in favour of the greater precision of collective computerized procedures. Perhaps it is true, but those who really want to study architecture must be aware that the imperfect beauty of art adds its own expression to graphical value, essential when it is necessary to fix a relationship between a non-transferable action and the act of transmitting an idea.

■

16. It is as though they lead nowhere, they are scattered in every direction, and it becomes impossible to go to from one place to another.
Paul Citröen, *Metropolis*, 1923

THE STREET

In the past many people said that young people learnt most on the streets. And to some degree they were right, because until recently the streets existed as such; people came and went on them and knew how to get to places. Today, city streets, frequented by people who want to learn no longer seem to exist, it is as though they lead nowhere, they are scattered in every direction, and it becomes impossible to go to from one place to another [16]. And if streets go nowhere one runs the risk of staying at home watching television or internet images that are not be found on the street. Information is no longer in one specific place, it is everywhere at the same time, anyone can go anywhere without going there, without effort, without doing anything, simply watching these images. Images without words or voices, without texture, even without colour, façades without feeling, without people, though it appears that there are; images filled with nameless people. Those who look at architecture in this way see nothing, merely images. Images that overlap, which cancel each other out, that are confused. Is it possible to educate the future generation in this way?

As such, these images are a support for building knowledge, adding details, but they are not an end in

themselves, however, knowledge in itself cannot be founded in them, it is unrealistic to assume so. Before the advent of televisions and computers, architecture was found on the street, as far as the eye could see and people could see and touch things as they liked. There were endless streets, all filled with visual and tactile models. Because, on the street, in addition to architecture and detail, is feeling, the certainty that one exists [17]. It is not the same thing as seeing things on computer screens, where it is impossible to smell things, sounds are unnatural, perspectives and lighting neither. Architecture is not visible on screens, it cannot be touched, we do not know whether it is rough or smooth, or whether air can pass through it, furthermore, screens cannot take into account real people, an essential part of all architecture. Architecture seen on a computer screen remains as though it has been put there by someone who wants to teach it as he wants to see it, though knowing nothing.

There is an obvious risk for those who look at architecture in this way, as if they could see it in these bright devices that abound and resemble each another. But these devices know nothing, try them, try seeing if something is rough or smooth. They certainly do not represent architecture, they superpose it, they are not natural, they are unreal. How can you teach like this? Because the risk is that student will suppose that architecture is like this and will suggest in his works objects that have no sense, resembling each other, whether they are in Geneva or in Agadir. And then,when exercising architecture, in the competitions in

17. Because, on the street, in addition to architecture and detail, is feeling, the certainty that one exists.
Mantova

which they may participate or in their work, construct buildings where people have no place. This is the unconscious consumption of images, forms that are neither objects nor beings, and obviously not architecture.

On the other hand, any street, anywhere, is a vast and powerful source of new ideas for any student [18], and will therefore be our next step towards understanding architecture. We will find it as we proceed, presenting its proportions, dimensions, incertitudes, clashes, degrees, its manner of resolving the various questions that present themselves. The street has its reasons, its uses, its ingenuity, its places to relax, its different surprises, in brief streets are full of life and people. And that, in a word, is architecture.

Of course, in general, on any street more information can be found than could be contained in several dozen books; needing days and more to learn what can be learnt from the street. It is not in vain to say the street is a synthesis of hundreds of purposes created over time by people who, long before us, thought and decided how things should be made for all our needs. On streets there are buildings, of course, but a street is also a setting, an attitude, which we shall discuss later. The architectural setting is almost as important as architecture itself. Of course what we mean by street is the external relationships between things, together or individually, whichever the case. Every street is a successive sequence of buildings for different purposes, the street is both methodical and different at the same time, such as is

18. On the other hand, any street, anywhere, is a vast and
intense source of new ideas for any student.
Munich

architecture, it is within the reach of everyone, it is both organic and inorganic: indicative, enveloping, unusual. Where it is better to teach and learn architecture than in a place that offers so many advantages? Furthermore, the street is the anti-chamber of the city and the city a prelude to the landscape, its result. The landscape resumes the encounter between architecture and the horizon, horizons that can be transferred to other places, other cities and streets. Let us discover them with new and real sensations. After comes the need of movement, an essential component of the street, going further, seeing other things, comparing them with what we already know, discovering surprises, different architecture that comes from different traditions and different landscapes [19]. It is fascinating to go deeper into the relationship between architecture and the landscape that makes it possible. Until recently, architecture was a consequence of the landscape and people; anyone who looked carefully could recognise people through architecture. This is the living component of all architecture, the common point between material and expression, the consequence of forms and systems that confers the constructive non-transferable character to the architectural landscape. Therefore, education needs to add distance so as to contemplate the different ways of doing the same things, but elsewhere, in other streets; adding clearly different suggestions. It is essential for the student to travel to study architecture, the same goes for those whose desire is to teach it. Travelling from place to

place, walking and observing[*], stopping when necessary, without undue haste, so that what is seen is fixed. Taking time to look carefully, going to places and continuously observing, noting fine points, sketching or photographing details and encounters, without the pretence of being able to capture the larger images like those seen in magazines, without details, that is what the street offers. Thus we enter into contact with the smaller dimensions of architecture, discovering its details – its characters, how they are formed together to make words, we see the beginning of architectural grammar, which encourage us to compose our first phrases. It is the task, which, for the moment, concerns us, how and what to do, until the moment we can perceive the space which is formed by the effort of energy and action.

On the street, any street, we can find the means to create ideas together. For the moment we must separate the city, in order to understand the street in detail and discover how the city has developed in one of its corners. In our approach we should always endeavour to understand what comes next, the specific, before developing and observing diversity. Because as in all professions the study of architecture is nurtured by repetitive actions, actions that are essentially small,

[*]Travel has always been an indispensable tool for learning. There is in travels a long sequence of comparisons and surprises, of understanding other ways of resolving similar questions, of seeing new and unhoped-for agreement between landscapes, people and the architecture that is proper to them. Travel is discovering reasons, understanding almost anything thing that can have a rational result: it is places that make being like it is.

José Laborda Yneva

19. Discovering surprises, different architecture that comes from different traditions and different landscapes.
Village in the Draa Valley, Morocco

should be examined so as to be learnt but without becoming involved in details to the point where we would be overwhelmed and learning would cease. It is these first steps which will enable us to acquire the habit of looking ever further. We will evaluate these details and then sort them by type and by result. This will at the same time be an organic and a functional archive, frequently updated, entering information and changing it, soliciting it whenever necessary, as it becomes a source of suggestions and solutions.

Each building we see is a vast repository composed of a multitude of details, and when examined, will provide much food for thought, the answers to why and how. No book can teach as much, we see what we see on the spot as it really is, understand the reasons, the system and its effectiveness, learning from what has already been built, learn how it was accomplished, deciding on the advantages or disadvantages of including it in our collection, understanding the purpose, the objective and principle. No subtlety will pass unseen, including materials, quality, colour, texture or dimensions; understanding the nature of the work and its interfaces, constructive mechanisms, durability and effectiveness; noting the coherence of each element, its advantage or disadvantage, the correlation between the means and the end. And, finally, we will decide, whether our efforts were positive or whether they were indifferent or inconsistent. We begin to learn the art. At first, most of what we see seems good; not very experienced we may find acceptable some fairly awful things. Then, after

20. This is the moment to introduce history to our work and discover
whether we have been capable of improving on the past.
**Baldassare Longhena, La Salute, Venezia, 1631-1687**

much observation, we begin to form an opinion, which trains us, informs us and suggests clear reasons that add or detract coherence from what has been seen. Our depth of knowledge will develop rapidly, with ideas coming and going.

And after some time, we can see that there are things that have barely changed from the basic principals, things that persist, that have not been replaced, which are consistent and are architecture. Of course, several of these things resolve the same needs, valid solutions whose differences may be found in the material, the system or the time at which they were proposed, but all of them will be architecture.

This is the moment to introduce history to our work and discover whether we have been capable of improving on the past [20]. There are two distinct categories in this subject, craft and technique, two ways of tackling the same things with different approaches. Craft embraces many things including time, dimension, the materials encountered, social facets, attitudes, organization, effort and skill. In general, crafts are related to history, it is the result of experience and the work of man. Few such solutions can be found today, though with admirable results, sometimes by creative talent, ingenuity, skill in demonstrating they have the knowledge to resolve past errors in order to achieve excellent results. For us, crafts are our greatest source of knowledge, we can never understand present day techniques if we do not recognise the influence in the evolution of crafts and organization. Today it is safe to say that a great number of crafts are
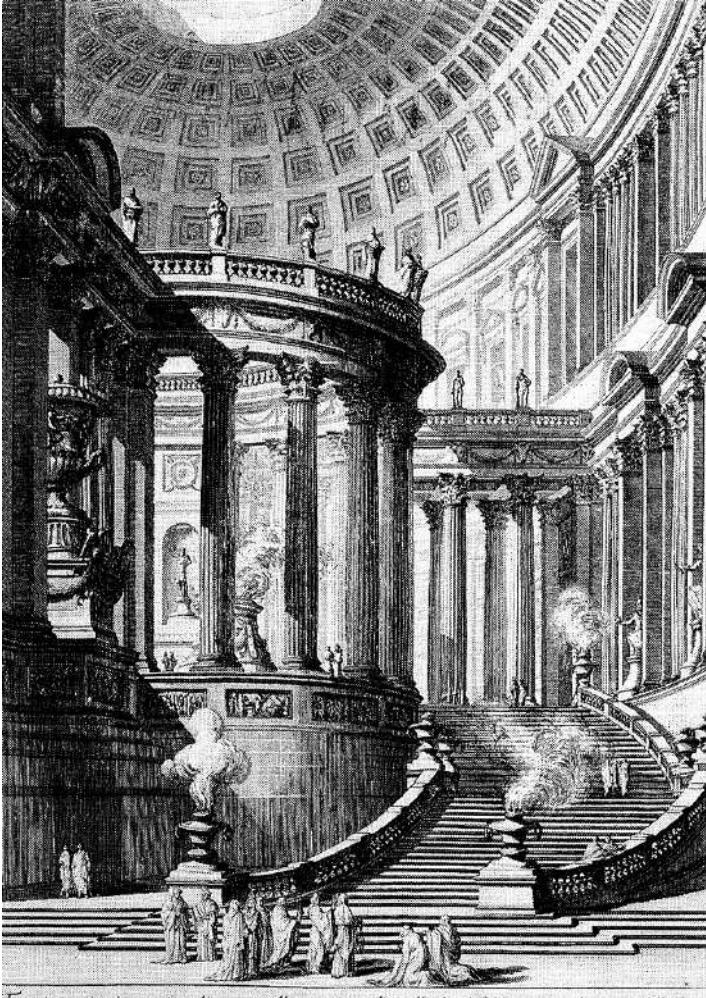
21. When with extraordinary intuition they composed beautiful architectural designs, though without any intention of building.
Gianbattisa Piranesi, *Tempio antico*, 1748

virtually extinct; consumerism and mass production have made them obsolete. But the source of architecture is found in crafts, we can draw some interesting examples from this fact and catalogue these and use them. Are the true *inventors* of coherent architectonic systems found in these crafts? In any case the great contemporary masters of each epoch not only transformed experience, but used it to propose more complex solutions, employing the innovations of the immediate past. Where would Bernini have been without Buonarroti, Buonarroti without Bramante or Bramante without Brunelleschi?

In the teaching of contemporary architecture a great many contemporary *inventors* are met, ready to astonish the world with their genius, however we can only smile, as it is not possible they all discover the truth, the fact is human nature does not change, even if some believe it possible to accomplish great things without much effort[*].

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[*]Professions have always been based on experience, a succession of acts of trial and error that time and the intelligence of man have accumulated. A profession has its base in the functioning of things, in its capacity to find precise means by which things function as they should. It is the term 'function' that signals the difference between professionalism and talent which marks tradition. Because once it has been observed that something is useful, any process that can demonstrate its advantages, it will justify the addition of one more link to the effectiveness of the profession. No doubt it is why architecture can be considered the result of a process based on the accumulation of experience. Its own intellectual spirit surpasses many times its mere functional condition: the objective of architecture consists of surpassing itself, excelling its own experience, inventing. It is precisely the complex process of invention that adds to the profession its component of risk, daring to suggest what experience lacks. History has demonstrated that architecture has always dared

The training of the new generation relies increasingly on visual processes and not on experience. As a consequence, the images seen on computer screens carry the risk of making the unworkable possible, appearance alone gives an architecture without context or depth. Further, we want to manipulate feelings, effects, by transforming them into expressive forms in the guise of architecture. But this was already done by Boullée and Piranesi long ago, when with extraordinary intuition they composed beautiful architectural designs, though without any intention of building them [21]. In fact, the buildings that were constructed had little to do with their plans.

The difference between our time and that of Boullée's is that techniques have progressed considerably and that almost anything is possible today, although sometimes it is difficult to demonstrate a link with the actual development of talent and worthwhile architectural design. In addition, rare are those who know how to build the architecture they design, this is the responsibility of engineers, they provide solutions to many of the difficulties related to construction, especially concerning durability which is one of the axioms of

new things before transforming them into professional acceptance. It is a process of successive approximations, new experiences that are gradually converted or are finally abandoned as being unacceptable. It is precisely in this resides the function of invention, in the notion of discovery; in its capacity to interlink with the experience that has served as a base to progress from invention. But the difference between invention and the arbitrary resides in talent, architecture does not merit arbitrary incursions, where experience prevents the arbitrary from being accepted as architecture and when the ideas proposed are at the limit of viability in profession terms.

22. Technique has been developed from the progression of natural style, it is
this which provides increasingly
effective solutions that give elegance.
Metz Cathedral, 1240

architecture, which we shall discuss later. However, when learning, a coherent development of systematic techniques is essential, progressing step by step, as will be demonstrated. Historically, technique has been developed from the progression of natural style, it is this which provides increasingly effective solutions that give elegance and add comfort to the places that surround man [22]. The difference between techniques that add to the development of architecture and those that come to the rescue of the arbitrary is the ability of the first to demonstrate the progress of intellect, unlike the second, whose only goal is to resolve unrealistic compromises. Architecture can of course be found on any street, we can discover it by simply looking at it, we can also use it as a base for critical evaluation. As in crafts, techniques have a relationship between material, adaptability, quality and result. Techniques are mainly linked to the quality of the material and its suitability, on this adaptability the result and the durability of the solution. But for the moment we should not concern ourselves about abstract issues relative to the durability of things, the more immersed we are in techniques the greater will be our weaknesses, the greater the dependence on factors unrelated to the real capacities of man. Therefore it is normal that most buildings indispensable for understanding of the *modern movement* have needed renovation over the past eighty years.

Reduction in weight involves less material, increased stress, greater compromise and a greater capacity for reasoning. It is not necessary to refer to the
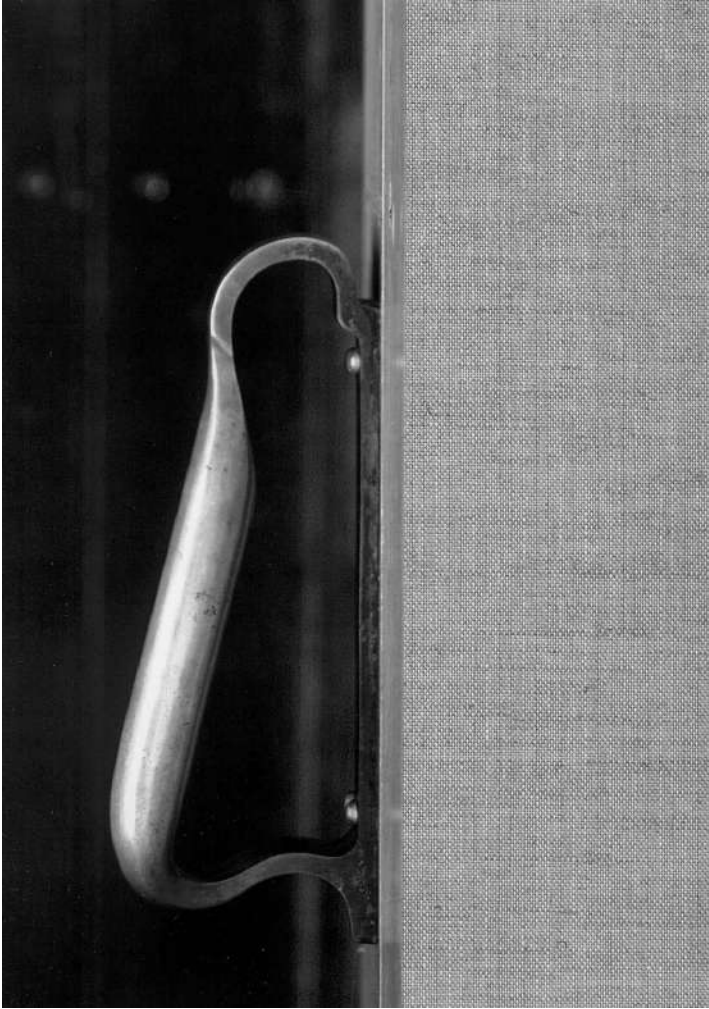
23. We will use a rational procedure, starting from the beginning,
studying the reasons for architecture.
Alvar Aalto, a door handle

time of Vitruvius to know this; the Western World has been filled with Gothic cathedrals for over eight hundred years, which explains the progress in the work of man in his pursuit of the domination of space. It is a relationship between dimension and reason that explains why pre-stressed concrete materials are perfectly suited to architecture, engineers of course know this. However, architecture demands that the quality of these materials lasts over time. And more precisely joining them together requires precise measures to obtain stability and impermeability. Perhaps the risk of sound contemporary architecture lies in the interface between materials. We of course take reasoning for granted when it comes to establishing the quality of the material and its dimension, but sometimes we trust links to solutions insufficiently tested, without the time necessary to demonstrate their capacity to last. Perhaps that is why our journey through the streets will deal mainly with the ways these materials connect together, we should not forget that we are still in the process of learning. Thus, our collection of details will increasingly add technical solutions to the crafts we already know. And the process is the same, new solutions arrive, some become obsolete, and those whose effectiveness has been demonstrated remain. One might now ask: in what consists the efficiency of a technique?

Undoubtedly in improving the effectiveness of previous systems, facilitating construction, material economy, the durability of the result, the ingenuity of the solution, realism in its use, fluidity, reversibility, reusability. But none of these advantages diminish the

comparative and functional quality in the result in relation to others that have been used previously; on the contrary, the degree of comparative quality depends on a system, the greater the comparative quality of a system, the greater its effectiveness.

Of course a greater awareness in the initial phase of gathering craft and technical references will increase our ability to deal with what is now called the science of architecture or *architectonics*. It is indeed a suitable term, it supposes an action and that action is construction. There is no possible uncertainty in architectonics nor can it be biased as in two dimensions; there is action, construction, volume and real space. It is essential to begin by learning to recognise constructive actions, which we have already agreed remain abstract and expressive faculty should be reserved for later, specialization for much much later, when the subject has become much more familiar. Our method is part of the apprenticeship in a profession and is within the reach of almost anybody. How can such facts be ignored, establishing in their place theories that have no sound basis? We know however that after facts come theories, but how can we explain this if we are ignorant of these facts? Then, if we are capable of relating one thing to another, we are able to put a name to it, then applying intellectual processes that can propose solutions which enable our own solutions to progress. It would have an effect equivalent to linking words with sentences, sentences with concepts, concepts with expressive ability

24. Those who believe that, in addition to everything that has been said about it, architecture is simply *a means of managing things*.
Marc-Antoine Laugier, frontpiece for *Essai sur l'Architecture*, 1756

and expression with form. How can we begin teaching form to those who only want to know the name of things?

We shall not invent a method, we will use a rational procedure, starting from the beginning, studying the reasons for architecture, then, step by step, describing the space that it defines [23], the places where it can be met, the constants that should be taken into account and that characterize it. And finally, show that we are at the commencement of understanding the basics concepts of the art.

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José Laborda Yneva

THE HOUSE

There are a great many excellent definitions, all different, of the unfathomable theory of architecture. Almost all are good, some exciting, even more of them play with words, adding wit and subtlety, amplifying the definition, almost turning it into a lapidary contrivance. But perhaps these definitions have something in common, they lack naturalness. Certain believe that, in addition to everything that has been said about it, architecture is simply *a means of managing things* [24], however, we have the advantage of being able to do what seems best to us: complicating things when we are faced with complex problems or simplifying them if necessary when faced with simple problems. But even if we prefer simple things, we shall not be limit ourselves to these, we cannot if we want to teach, and we cannot for the moment speak of for example *forms bathed in light*. It would not be constructive, or at least would not be completely constructive, it would be somewhat limiting. Yes we can say that all architecture supposes action and actions have to be seen, one way or another, with man's intelligence and his desire to dispose of matter and space intelligently.

Let us go further by using this definition to explain

the sublime act of hauling a huge piece of stone to a peak
to denote man's link with the inexplicable, or define it by
a functional action, no less intelligent, but perhaps less
instinctive, which prompted man to abandon obscurity,
which bound him to one place, choosing another, perhaps
more suitable for his needs and comfort, with the
materials necessary for the shelter that he had not had
before. Both of these acts brought together intelligence,
will and instinct[*].

Surely, the first is more poetic than the other, but both
acts are very closely linked to architecture. Moreover,
they are the essential acts that the human race has always
exercised when trying to react intelligently to the two
instinctive reactions linked to the precariousness of their
existence, the fear of the unknown and the uncertainty of
their immediate environment. They emerged as the two
fundamental elements of architecture, man's spiritual
need and his shelter. Undoubtedly, architecture has to do
with instinct, although it can be considered as a
secondary element of this, an instinct derived from the
exercise of intelligence at a later stage of existence, self-
defence or the perpetuation of the species, three instincts
in which reason has little meaning. In any case, these two

[*]If the house is the paradigm of architecture, living in it is also related
to the condition of man's intelligence. The form of living and its
consequences are derived from our dominant instinct, certainly the
most human act that can be exercised. That said the question persists
concerning the essence of the house, of its extraordinary attraction. It
is not the human condition that lives in it, it is people, the same but
different. We can only recall what Alberti said: 'There is no greater
difference from one man to another than his capacity to appreciate
beauty.'

concepts, symbolism and functionality, make up the many variants that have motivated intelligent actions accumulated over countless generations. And as perhaps the most symbolic has more to do with the theory of things; the method we will use for the moment is however, before anything else, realistic, and therefore functional. We shall thus extend the knowledge we have learnt on the street, inserting it into various functional programmes, which in principal are simple at first then becoming increasingly complex. But we cannot say that symbolism does not have its place in functionality or that functional components cannot be symbolic. This will be discussed in due time.

Now for the functional, we will discover that apparently shelter, in the form of a home, is the simplest project that can be undertaken. Simple? This is not the appropriate term; there is no simplicity in living, and we are right if we say this is evident, for the moment. What may be obvious can be the result of something simple or extraordinarily complex, it depends on what we want and the means at our disposal [25]. We could even take shelter as the paradigm of functionality in the same way we have adopted the systems found on our street as models of crafts or techniques. There is not only one way to simplify things, it requires learning in order that the student progresses and with the conviction that any craft can have infinite functional and technical nuances, even though only a few may be necessary, in addition to practice, of course. The symbolic is something different and will be treated separately.

25. What may be obvious can be the result of something simple or
extraordinarily complex, it depends on what we want.
Andrea Palladio, Villa Capra, *Rotonda*, Vicenza

No one can doubt that shelter implies safety and protection, which requires: construction means and the availability of materials to cover the space so that it is protected. In those two terms: *construction means* and *materials*, are found all that is required for cover and shelter, which is to say functional architecture. The programs may require quantities of functional variants simultaneously. Without the need for construction means to assure the protection of the perimeter and interior, roofs can be made up of any material necessary for protection from the elements. The use of these infinite variants has always been and will remain the domain of architecture.

The rest is simple, it is sufficient to put into place the people in need shelter or sheltering. In this case, architects should be like tailors were in the past, capable of adding height to short gentlemen by recommending striped suits; appreciating their customers measurements and tastes, to ensure they were comfortable and elegant, so that their clothes fit well, would last, and were of good quality. Surely, we can teach those who wish to learn the craft of architecture as we would tailoring, so that they are capable of planning projects in the same way a tailor cuts a coat or a jacket. [26]. And then, if our tailor wants to go onto haute couture and experiment with forms, superimposing small or large variations when needs or suggestions appear, based on additional functional requirements. This is normal and should not concern us, that is unless we overlook the need for people to be comfortable and at ease in the clothes they need.
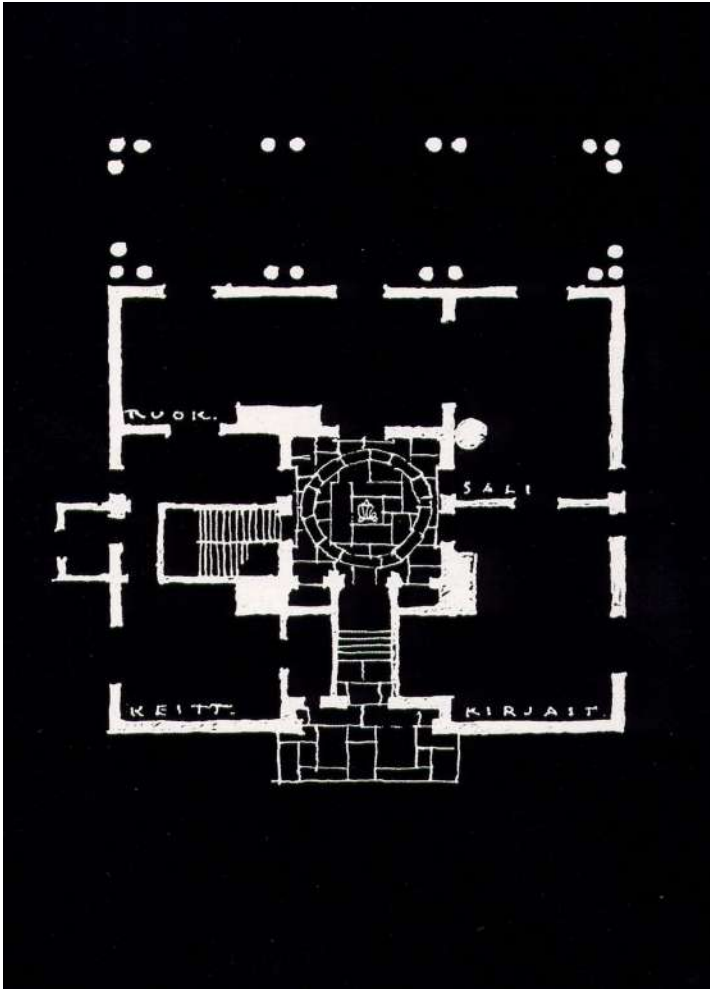
26. We can teach those who wish to learn the craft of architecture like tailoring,
so that they are capable of planning projects in the same way
a tailor cuts a coat or a jacket**.**
Alvar Aalto, Väinö Aalto's home, Alajärvi, 1918

Sometimes it happens that those who teach architecture start by teaching haute couture to those who are still pricking themselves with pins. They are convinced this is acceptable, it is no longer functional, it is uninteresting and outdated, and students believe them, distancing themselves from the purpose of architecture. Another thing that is very clear is the intellectual process that envelopes the project be capable of artistic appeal and controls part of the function or the form as a consequence of emotion. So, yes, architecture will oblige, architecture wants to produce emotion when it can. It knows that its really poetic works have often been dysfunctional, this will be discussed later. So, those who study architecture should be aware of this and be constantly alert, watching for the moment when their functional works could become poetic. But they should not totally refuse to accept it, this would be a disaster, emotion must come out, nobody can transmit emotion without it being desired.

Thus, for now, before any functional considerations it is indispensable to be conversant with the project or make every effort to be acquainted with it, asking, watching, moving, checking and even copying if there is an already proven model. Copying? Why? Because there is no logic in making things worse when acceptable models already exist. Is there a more perfect example of temple than that of Jesù de Giacomo Vignola's at the time of the Reformation, for example? Or did Vignola not take into account the plans of existing cathedrals when seeking his idea? This will be our model, for the
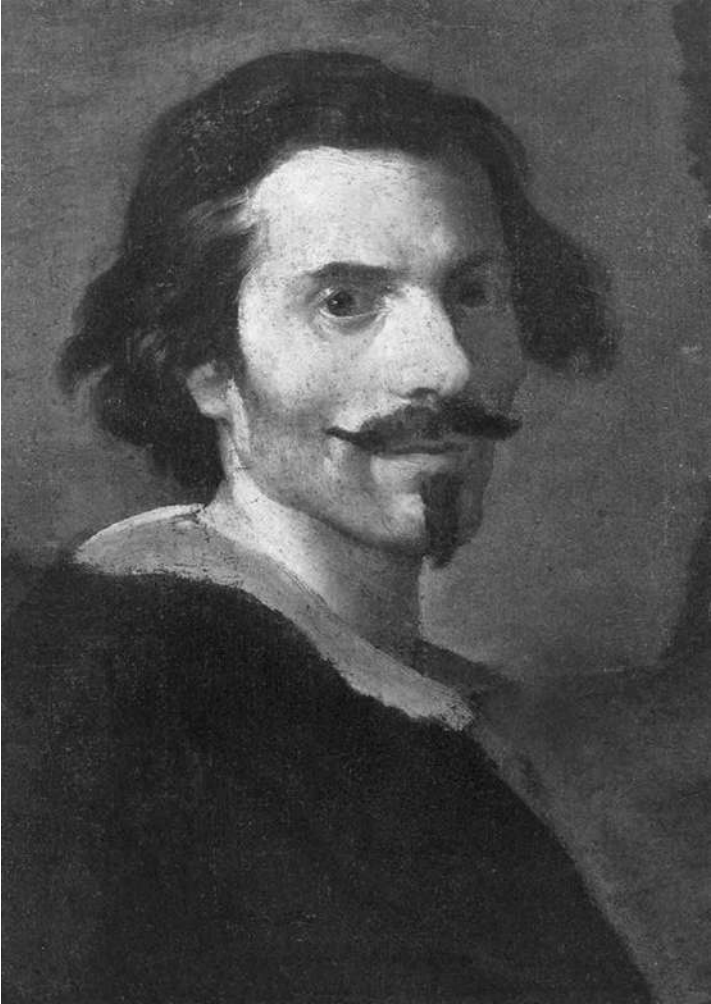
27. Are the churches of Gianlorenzo Bernini like those of Guarino Guarini?
Gianlorenzo Bernini, 1598-1670

moment, and then, since neither the site, the material, the scale, the evocation, or the traditions will be the same as that of Vignola's, our temple will be adapted to our times, as were the beautiful baroque churches designed by Roman and non-Roman architects over a period of almost three hundred years. Are the churches of Gianlorenzo Bernini like those of Guarino Guarini? [27] In no way, but they all function equally well; their model was that of Jesù de Vignola's.

This is a question of teaching planning, to extend the concept of shelter, going deeper into things, without giving too much importance to their form for the moment. Our form will depend on the circumstances, whatever is appropriate, and furthermore, we can be sure, when it emerges, everything will be in its place. It is not something that can be done quickly, it is not easy to plan well, nor will it be comparable with the kind of sketches some contemporary architects draw on a paper napkin. A single idea that seems to fully solve a planning program in a single stroke, the form, structure, appearance and perception of a building, is not architecture, this is not serious, given the intelligence planning requires. And, in the case the sketch was made before the project, because often it is made after, it is as though the architect wants to demonstrate a pretended genius. In reality genius is a rare thing and there are few geniuses at any given moment of time.

There is a degree of petulance in the practice of contemporary architecture, which does not recognise its nature, its limits, or its intelligence. Intelligence is a gift

that abounds, genius on the other hand is unfathomable, it anticipates, it has the capacity to use unrecognised knowledge, moving forward to build an unforeseen future, which of course, had not been imagined before. This was for example the case of Bernini. At times we look at things before us, and by turning our eyes, we may see something that is genius or perhaps merely intelligent. They are not at all the same things, especially when the intelligent is relegated to an addition of gestures in search of genius. It does not work; on the contrary, occulting intelligence transforms it into something useless, pathetic. Thus, from an evident – but not simple – collection of modest houses to a large clinic, just to cite two forms of shelter in different sizes and destined for different uses, our method will always be the same: looking, collecting, selecting and applying.

The form and style of the model chosen depends on our imagination and our efforts if we wish this to be a singular work, if singularity is what we want; or functional without interesting ourselves in the architectural option, strictly pragmatic, if we have to limit ourselves to a fixed budget. It is most probable that the result is a combination of all these conditions: specific, effective and functional, relative to predetermined objectives, or methods applied relative to the needs of our projects. We should not overlook the fact that our projects are a true reflection of ourselves. But they can never be bad, if we have planned them with method, without introducing whimsical ideas into them. It is difficult to conceive bad architecture when we have

so many good models before us as references!

Aalto, for example, surely one of the most convincing masters of the twentieth century, did just that: I saw with my eyes, then put into place people as had never before been done, added feeling to capture the landscape, the environment, the material and the form [28]; extracting from them their spirit, their atavistic order, using the measure and skills we learnt from childhood, observing the attitudes and customs of beautiful Finland. For certain Aalto was a genius and perhaps that is why he understood his own limitations. The need to travel south to find a different light, another way of looking at things, matching his own, his atavism merged with his conscious perceptions in his homes, offices, concert halls and hospitals using unusual devices at the same time capable of taking the past and suggesting the future. Maybe that is why his ideas are constant sources of inspiration for other architects. Naturally our situation is not the same and perhaps this is the moment to warn students that it is necessary to consider the condition of things when inspired by them, especially when the form and materials belong to a landscape different from our own. We cannot extrapolate landscape, and we should not expect to find Finnish buildings in the Lagoons of Ruidera [29].

But Aalto's approach is available to anyone who wants to develop it with sincerity and naturalness. Often we see pointless and unnatural solutions that would have been better if someone had not felt obliged to demonstrate what is indemonstrable. There is no reason

28. Then put into place people as had never before been done, added
feeling to capture the landscape, the material and the form.
Alvar Aalto, 1898-1976

29. We cannot extrapolate landscape, and we should not expect to find
Finnish buildings in the Lagoons of Ruidera.
Finland

for pride when there nothing to be proud about, perhaps pride is the compensatory attitude of arrogance in those who know little. Surely contemporary architecture at times fails to grasp this, when it is better to learn rather than trying to astonish. Those who look carefully at things quickly realize it when this occurs.

We have already spoken of shelter, but we must remain attentive to dimension and motivation, adding to our method technical and spatial components so that each thing has its role and place. And above all, when a thing is well positioned and functions, the result is evident, its *style* according to fashion designers, or the *no sé que*, as Feijoo would say. Architectural style is no small thing, it is practically impossible to teach or learn it; it is something we must accept. Everything depends on the ability to connect one thing with another in the right way. But explaining what style is, is something that comes later, along with appearance and attitude.

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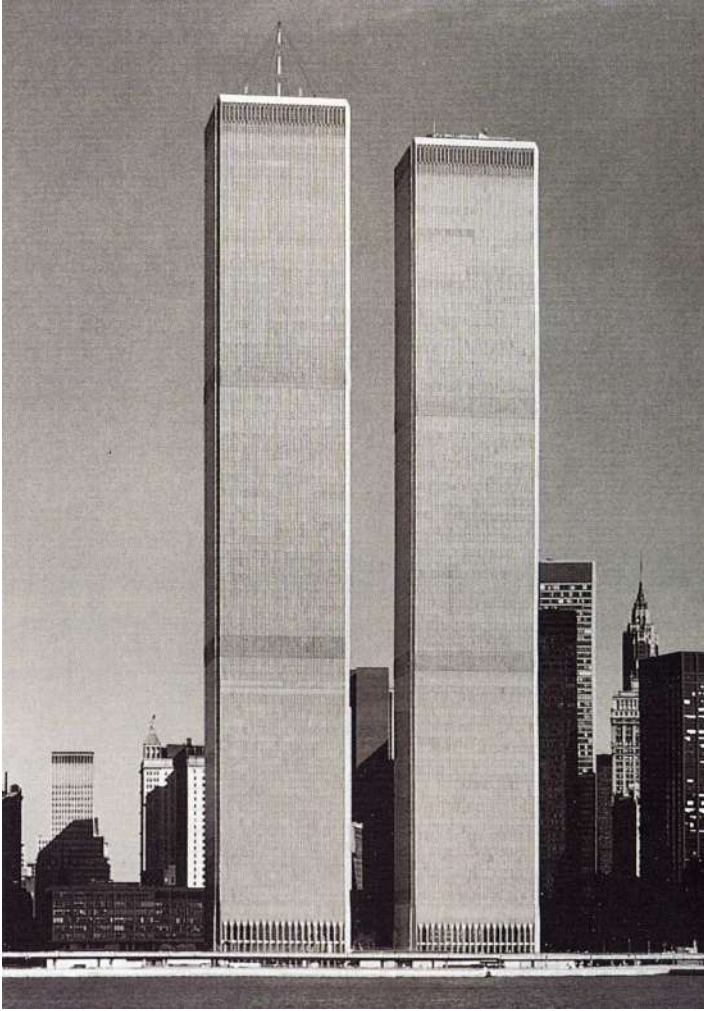
30. Why not consider large commercial buildings as symbols of
contemporary society and consumerism?
Minoru Yamasaki, World-Trade Center, New York, 1973-2001

SYMBOLISM

After after examining ideas on shelter we shall now look at symbolic aspects. In the natural order of architecture, understood as an intelligent trait, there is much more instinct in the symbolic than shelter and undoubtedly the symbolic comes before shelter. Primitive incertitude is much greater than the unknown which surrounds us. If man faced with the unfathomable resolves his incertitude, why should he define shelter? If the goal is simply to be content then material considerations are not important, and if not, certainly the best option is to revert to instinct. Precisely this constant doubt in resolving the incertitude of the unknown is what has given rise to the role of architecture, to symbols as a point of question and shelter and as functional response.

Perhaps the most telling feature of symbolism in architecture is its intensely non-functional character, its suggestion, its questions, its indeterminate dimension. It is precisely because of this startling observation our modern temples of consumerism, large shopping centres, functional as they are, move towards the symbolic, as if they were fleeing uncertainty, when everybody believes that what we really want is to build material and economic performance. But consumerism has its

methods and understands the need for people to identify with something that, once again, is designed to alleviate their concerns[*]. Why not consider large commercial buildings as symbols of contemporary society and consumerism? [30] There can be no coherent explanation given the contradiction of the system.

We could spend a great deal of time talking about this, but perhaps this is not the moment. What interests us now is to accept architectonics and the symbolic power of menhirs so as to demonstrate the uncertainty of the unknown and through it explain the expressive capacity of architecture. A powerful and edifying gesture, we could say a transformation of the unnatural into the natural. We could propose a definition for symbolic architecture: the intelligent use of matter to suggest something with intensity. Since ancient times, many man-made prehistoric structures such as monuments, temples and towers have existed; these were different ways of expressing the uncertainty of people and a desire

[*]Relative to the contemporary symbols of architecture, such as can be linked to the condition and the notoriety of the recurrent process that the symbolic raises in our times. But, even if architecture proves to be abundant when considering the symbolic, it should be remembered that the essence of the symbol resides in the action, not in its amplitude. It seems as if present day architecture does not want to run the risk that its vision could pass unseen, on the contrary, it evidently wants to use it with the means it has at its disposal. Again we encounter invention, and we know that its ideas are much greater than that of its coherence, more dangerous. This is why it is important to know whether the risk has its base in progress or in arbitrariness. Today both options are considered as invention, it is the result that allows us to accept or reject their incorporation into the merits of architecture.
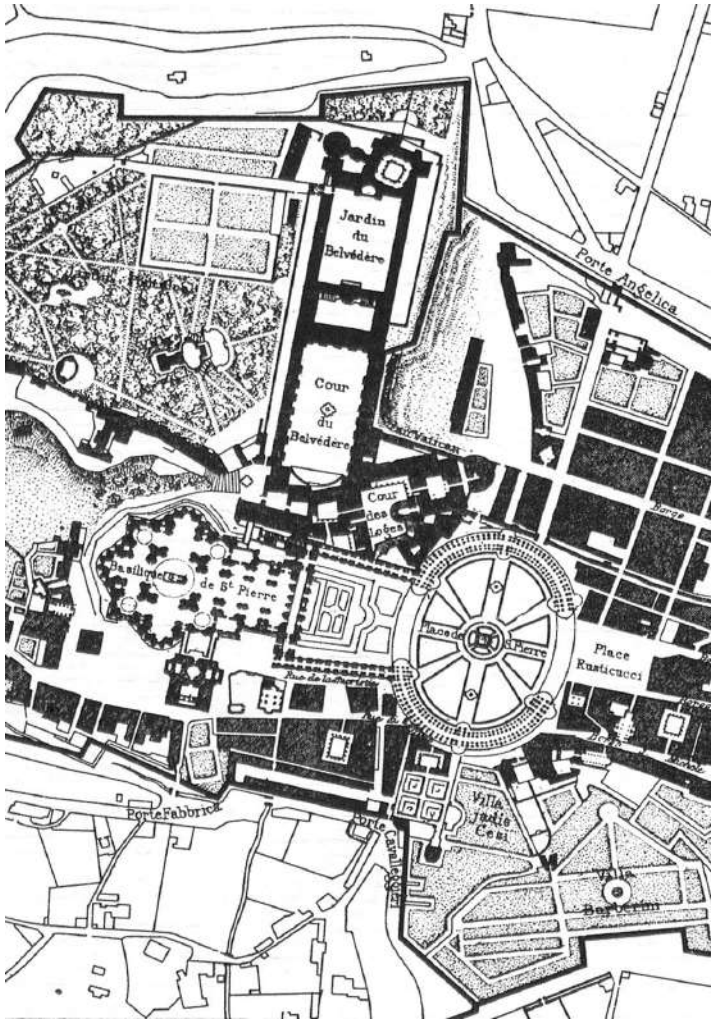
31. But on the question of symbolism should we attribute to the colonnade of St. Peters the same inspiration as that of prehistoric structures?
Paul Letarouilly, Edifices de Rome Moderne, 1838, layout of Saint Peters

to achieve unattainable transcendence. In all the structures that were erected we can understand the evident non-functionality, or, at best, the declared unifunctionality: barely serving for anything other than to show their presence from afar or to gather around or inside of them the people who shared the same uncertainty. Maybe this way of seeing reality is a little disconcerting for the student, but, if we look closely this is the way things are.

However, leaving aside the transcendent, the truth is that architecture has been very accommodating for the incertitude of a lot of uncertain people. Without it, they would have lacked the motive, not made so much effort to demonstrate, the desire to be extraordinary by resembling, at least a little, their instinctive suspicion of the greatness of the universe. But with all this, when we look at architecture closely, even the most sublime inserted into its own landscape, such as those striking Attican temples that stand out against the sky, we understand the boldness of those who wanted to manipulate materials to alleviate their uncertainty, though no architecture has ever surpassed its own landscape. Fire is something else, it cannot be manipulated and therefore might compete with the landscape; fires inside – those of oil lamps – have been a constant symbol in every temple that has ever existed.

Let us examine the non-functionality of symbols and menhirs as paradigms. For the moment we will not go into the history of architecture, but on the question of

32. Spatial systems as varied and distant in terms of time, place and form, as the minarets of the Taj Mahal and the National Library of France.
Dominique Perrault, The French National Library, París, 1999

symbolism, should we attribute to the colonnade of St. Peters the same inspiration as that of prehistoric structures? [31]. Its non-functionality resides in it being an enclosure, signalling a holy site, in the same way as other symbolic elements do, many years later, forming a solemn site, to the extent of being able to establish a similitude between spatial systems as varied and distant in terms of time, place and form, as the minarets of the Taj Mahal and the National Library of France [32].

There is another component underlying the uncertainty expressed by symbols: purpose. Historically, purpose has always accompanied architecture on its path towards fiction, it is a disguised form of uncertainty, a compensation mechanism vis-à-vis the certainty of limits as well as the evidence of the limitations of certain people to whom architecture seems capable of subverting the natural order of things. From this are derived the pretentious gestures that have been imposed on others by those who have always held authority. Architecture has also benefited from these pretentious goals, imagining exaggerated proportions and spaces that seem so outlandish to ordinary beings, which were circumstantially raised over the builders' fellow human beings. There exist innumerable edifices that demonstrate this manner of confronting things. We can find many such symbolic creations with no inspiring justification; pretentious acts, unable to match the landscape in spite of their purported power.

Because, looking carefully, the expressive

limitations of the human species have too few resources to be outstanding, and alone can raise things no higher than their ambitions, whether with pyramids or columns, which remain essentially small. However, almost nothing can match the evocative sense of a truncated column, an effect considerably more stimulating than it would have been if it were complete. It is precisely this unexpected effect, the random break and the organic effect that it implies, which gives the column a significance of the incomplete, capable of contrasting with the landscape. A coherent act, with its own symbolism, does not prevent attributing to things their just proportion. There is no pretension in a broken column, there is causality and measure. That was certainly the effect of classical period ruins on perceptive travellers, who were fascinated by the work of man and his symbolic capacity. Is there anything more non-functional that a truncated column?

Nothing can hide the non-functional power of funeral monuments, the highest expression of uncertainty before the great unknown. But the meeting place of people with a shared insecurity, the temples, with their non-functionality – the worship of the divine, the intangible, their function – manifests in its architecture an explicitly non-functional role in its size, power, and above all elevation. No one needs such a space to meet; the size of man is small in proportion, barely needing such a site. However, when man ties his relationship to the uncertain, it seems as if he wanted to become greater, to rise to the circumstance. Why? What do we want these temples to contain? If what they are required to do is to

33. So when we look carefully at the architecture of symbols and their reference
to the horizon, we find ourselves before an almost childlike effort.
The Acropolis, Athens

contain the people the results are huge, and if what they pretend is to be commensurate with the incertitude, the result is ridiculous. No technique or symbolic expression provides a fitting scale between architecture and incertitude.   So when we look carefully at the architecture of symbols, including pyramids, and their reference to the horizon, we find ourselves before an almost childlike endeavour [33].

The proportion of things is essential to architecture, but how can we form coherent criteria to bring together incomparable things? So, gradually, we will commence by understanding the theory of architecture, always taking into account the undeniable and inescapable volumetric and expressive limitation of the result. From this, any theoretically or expressive proposal is possible, given its origin and its limits. So without realizing it, we have moved from our small gatherings in the street to reflections on the sublime. This method has enabled us to add knowledge to our increasingly solid base, now understanding the need for experience in observing the essential pursuit of art in the making and the urgency of adding feeling to expression by giving architecture its characteristics, even human, with the goal of being as convincing as possible.

■

34. Gothic cathedrals were built not to compete with the horizon, to be viewed from afar or blend with the people, but to emerge unexpectedly.
View of Paris, Nôtre Dame

SPACE

Let us now look at our Gothic cathedrals, with their emotional and dramatic spaces imagined for the congregation of such small people inside. This vision is hardly better than the appearance of cathedrals against the surrounding landscape, they are reduced to almost nothing, almost that of the people inside when seen from afar. Of course, Gothic cathedrals were built not to compete with the horizon, neither to be viewed from afar nor blend with the people, but to emerge unexpectedly, [34] weighing on all those unfortunate strategies, such as the those of Viollet-le-Duc, simplifying facades and creating squares so that the edifices stood out better, they as a consequence lost their capacity to astonish. Since we cannot compete with the landscape, we should avoid it, deleting any reference to it so as to avoid the loss of scale, we should build beautiful buildings that generate a feeling of emotion from within, limit the uncertainty of the space that surrounds us – as cathedrals seem to suggest. This is the concept of *interior space* in architecture.

We could perhaps assume there was a different approach for cathedrals compared to that used for high Greek temples, which stood out on isolated landscapes.

This difference is precisely what distinguishes Greek temples from Gothic cathedrals; a totally different non-functionality. The former were built to be visited from outside, only the priests could enter, it was the outer space that counted. The latter, except for the intended message of the porches and the height of the imposing spires towering over the lively small houses that surrounded them, were built so that their interior evoked the magnitude of the spirit. Seen from this perspective, we could perhaps find in the Greek temples a greater tendency for the ostentatious: if their intention was to fit into a landscape that overflowed on all sides, how had they not taken more precautions? Perhaps we could even suggest a certain naivety which stemmed from their polytheistic approach. However, this is precisely the reason that confers a certain validity to their models: the fragmentation of incertitude. The denial of the absolute in fact supposes the multiplication of divinities, and is in a certain manner a consequence of the human character with its resulting implications and limits, not necessarily competing with the infinite, and each temple with its ambitions, its evocations and its proportions. Although a temple can be profiled on the landscape, there is no attempt to compete with it, simply forming a contrast, the encounter between the serenity of the architectural lines with an ample background efficiently employing the external effect of the temple's mono-functionality [35], referring its scale to a potentiality of unimagined limits.

Thus the complex can be an interpretation of architectural space; we can even establish simple
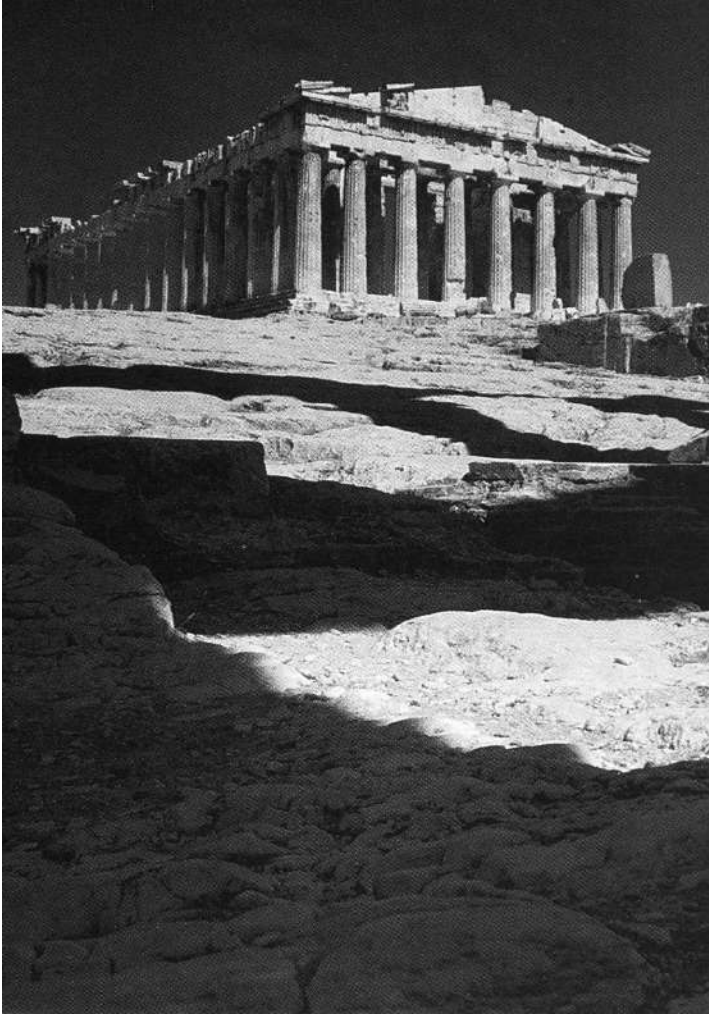
35. With an ample background efficiently employing the external effect of the
temple's mono-functionality.
The Parthenon. Athens

guidelines to understand almost anything. In fact, once complex examples are understood, the others become more or less obvious. So, if we pursue the subject of cathedrals, in addition to the internalization of space and its conscious limitations in maintaining proportion relative to people, we can discover its mono-functionality, the force which is the focal point of the sacred, and the place in which the energy of the temple is concentrated. In Greek temples, however, it is their sense of outer space and envelopment that confers meaning to their focal capacity, diffusion as opposed to concentration.

We can see there are spatial patterns in both pagan and Christian temples, together with the organic forms of urban spaces, which allows us to understand the essential differences between certain types of architectonic spaces. We will find in them ideas relative to the understanding of that space and all its internal and external variants: selection, orientation, surrounding, articulation and continuation, with each of these as transit points or meeting spaces. As to other variants we can consider these as additions or permutations of those spaces. Of course, the basic relationships between the interior and exterior and the outer form will be those that remain, those that confer distinction and identity[*].

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[*]In essence the concept of space in architecture coincides with its raison d'être. Architecture is volume, inside and outside, and all the volume necessary for a space to exist. It is difficult to be surprised at the variety of inner spaces, only the degrees can be recognised as merit worthy additions: the capacity to evolve, evoke, intimist or fragmented architectonic space that has been increasingly described

But this is natural, since it is not surprising that the enigma of architectural space can be easily resolved. It is simply; observe carefully, examine the sources, understand the motivations and evaluate them. If we can understand the most important of these, those which man conceived to achieve the impossible, how can we fail to analyse other spaces derived from them? The human species, as we know it, has obvious limitations in its capabilities and goals, and through architecture this can quickly be observed. There are no unfathomable processes in what has already been built, everything has its reason and these reasons have been long known and hold no surprises. The intellectual processes necessary for the construction of spaces are merely the result of instinctive criteria, experts have progressively defined these: scale, time, contours, enclosures, focus, close and distant, top and bottom, before and after. And all this, from the most sublime form possible, is found in symbolic architecture. So, surely, our short review regarding the inner and outer concepts of temples will provide us with a basis to deal with most other things. With this knowledge we can understand the subtle,

over the last one hundred years. Naturally, if we confer the concept of originality to the infinite combinations of spaces expressed, we can accept that architecture is capable of pursuing a path of creativity; if the contrary is true then we have to conclude, as is the case in certain other arts, architecture is dead. Exterior space is different, many more factors intervene besides the façade, such as the natural environment, as urban surroundings add their own virtues to the expressive quality of architecture, it is the form that manifests itself, its relation to size, scale, position and appeal that converts the external space into a rich source of relationships between form, expression and place.

though misleading, notions that some of the most extraordinary masters have employed to transform the essential concepts of architectural space [36]. In Rome, where almost everything that can be seen and understood, there are two magnificent examples of how architectural space is transformed: the Piazza del Campidoglio de Buonarroti, and the delicate effect of the Spada Palacio de Borromini.

They are distinctly different things, one internal and the other external, one powerful and urban, and the other profound and a little melodramatic, somewhat detracting from the general vision of architecture as external or internal forms. Two subtle allusions, though incomparable with each other in their quality and above all when Bounarroti imagined his Piazza at a time when the concepts of perspective had always been contrary to what he designed, whilst when Borromini planned his colonnade the effects of space were no longer a secret to anyone.

The technique of Buonarroti treated nothing less than the intentional distortion of reality, moving from the imperfection of the human eye that sees the apparent perfection of the rectangular plane from an arrangement of pieces, when in reality this disposition was trapezoidal. Students should go to see this and spend a long moment studying at it. Then, they will surely be able to address any matter related to external architectural space. Buonarroti was an expert in this and was pleased to demonstrate that he had succeeded in discovering the true dimension of man in all his senses,

36. The subtle notions that some of the most extraordinary masters have
employed to transform the essential concepts of architectural space.
The Campidoglio, Rome

37. Borromini was a very different character, one who liked to change things, complicate them, because he too was a very complex individual.
**Francesco Borromini, Gallery of the Spada Palace, Rome, 1634**

including his visual imperfection. His suggestion was not in vain, in his time the understanding of human characteristics was practically unpolluted, it was virtually at its beginnings. It was probably why his magnificent frescoes in the Sistine Chapel also reflect significant distortions in form, not because he was unaware that the paintings changed without knowing why, but because the people looking at them saw them as much more real than if they had been painted as they really were. Borromini, however, besides being a genius, was a very different character, one who liked to change things, complicate them, because he too was a very complex individual [37]. He seemed interested in constructing reality in a somewhat similar way as Mantegna or Gozzoli had produced it many years earlier in their extraordinary paintings, by choosing a columned vaulted space in perspective with a receding centre, built as though it was painted. It was almost a pleasantry, in which there is the effect of a deceptive background with distance when the geometric forms converge. Something similar to what happens with actors who are short and well proportioned, like for example Elizabeth Taylor in her younger years, who seemed tall on the cinema screen, because they were filmed with people or objects on a similar scale. Only when they are seen in real life the whole world sees their true size. However, the merit of Borromini, humanist though totally Baroque, was to teach people of the enormous possibilities fantasy could bring to internal architectural space.

Because, it should be noted that irrespective of its

volume, architectonic space permits it to go beyond the suggestion of fantasy. More precisely this is one of the merits of intelligence, to convince others of things that are not entirely real. It is not necessary to leave Rome to understand the disturbing effect of space inside the Pantheon. This also is a sacred space, but it is neither open nor closed, not even partly open, its ability for suggestion is extraordinary, it is a reflection of the synthesis of architecture, a fundamental concept, combining every constructive skill with spatial control. We could go as far as thinking that since the Pantheon was built – more than two thousand years ago – almost nothing has happened in the history of architecture, just chatter. It is a space enveloping its total volume, immense, powerful to the limit of the emptiness of its apex, producing a troubling effect by the absence of limit, when in reality it meets its limits everywhere except to the observer's eyes. We could say it is, at the same time, the sublimation of a menhir in its tendency to upward emptiness, and of a cave in its goal to enclose and protect. In fact, all the spaces that surround an enclosed central area that have been built since are based on the Pantheon [38], as all spaces having outside or peripheral effect refer to the Parthenon as the paradigm of the Greek temple, all the peristyles that have been proposed are in the Propileos of Athens; all the successive external spaces that can be imagined can be found, quite naturally, in the concatenations of the plazas of almost any Tuscan medieval city, and all the external and internal articulations, subtle consequences of spatial
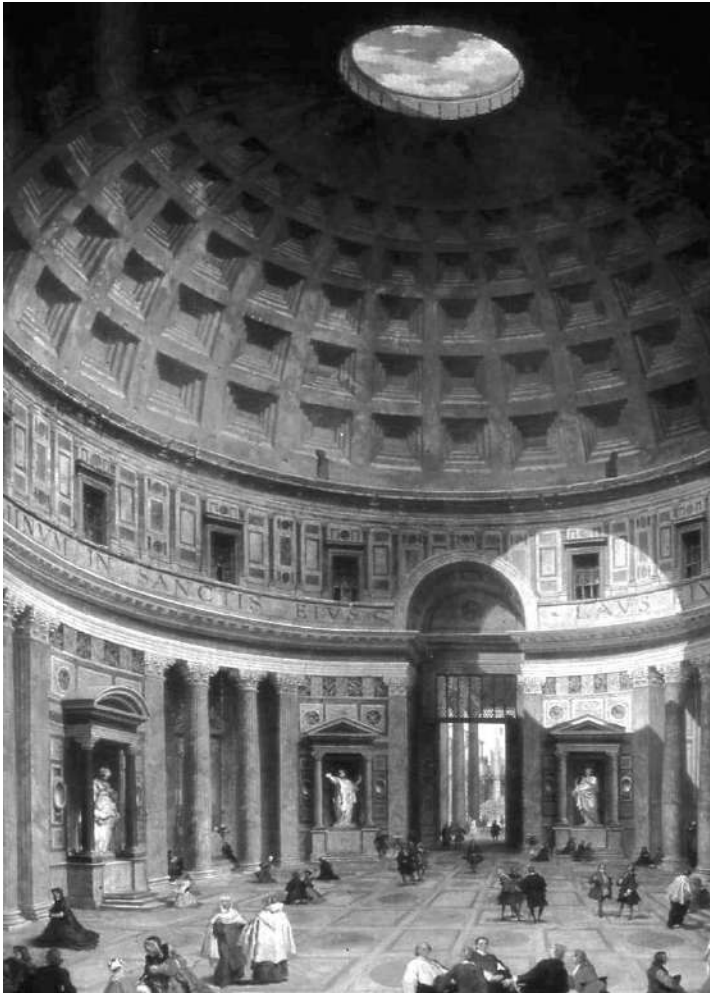
38. In fact, all the spaces that surround an enclosed central area that have been
built since are based on the Pantheon.
The Pantheon, Rome

39. The origin of his design could be found in Italy, in one of those grand cities that built its municipal buildings around semi-open spaces.
Alvar Aalto, The Town Hall of Säynätsalo, 1950

refinement, are found for example in the fragmented designs of the Alhambra in Grenada.

We might also consider that many visual or directional lines, Renaissance or Baroque, were already invented in Egyptian alignments, and all Christian churches are derived from the Roman basilicas, once the original bipolarity was transformed into unidirectional liturgy. Going deeper into in all this is very long, but, whoever wishes to study this has an already sufficient basis to understand many things. It can even be seen how modern and contemporary spaces, which seem so remarkable to their critics, and which may be very interesting in certain cases, are almost trivial compared with the spatial possibilities derived from the first instinctive works of man and from the continuous use of talent and efforts over the centuries. What often happens is that the memory does not fully conserve the ability of link certain things with others and does not always form part of the references of today's specialized critics. This has transformed the modern into a recent myth, which in a way comforts a certain naivety, drawing lengthy conclusions from its form and ideas, perhaps forgetting that all architecture was intensely modern in its own time. However, more serious modern masters are well aware of the origins of things, having assimilated and studied them and have been capable of transforming them in order to be able to say what they want to say. Aalto, for example, when he designed his fine town hall in Säynätsalo in a small square, which has since become a point of universal pilgrimage for contemporary

architects, had no objection in explaining the origin of his design could be found in Italy, in one of those grand cities that built its municipal buildings around semi-open spaces [39].

It could also be said that the concepts of space and volume have little to do but be seen; dimension supposes volume and space by its very essence, although it may go beyond that. In volume there is certainty and space invites, however, anyone can make his own theory on the subject. Architectonic space is linked to its surrounding, which always tends to overflow it, other spaces blend in with its effect, and spaces that, in fact, surpass their appearance through transparency or permeability. Surely a better definition of the concept of *architectonic space* is the *reason for being*, without which it may seem vague or insignificant. In the spaces in which architectural objectives are found limits always play an important role.

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40. In Italy itself, there is a lot more feeling in the temples
of Paestum than in all the forums of Rome.
The Temples of Paestum

José Laborda Yneva

SITES

Much of what has been said of Aalto is explained by the importance of architecture and sites. In fact, any building, be it remarkable or not, can be transformed into a real full sized scale model when taken from its site. The construction site must be taken into consideration by architecture, even though this approach has not always been the case in history. Taking into account the site does not necessarily mean that architecture should copy its surroundings; it could be in contrast with it, proposing breaks, creating powerful forms in the midst of vast deserts.

But there should always be inspiration. The Acropolis in Athens, for example, could be a key model for contrasts, with its form surging forth dominating a summit overlooking the plain surrounding it. It was intended to mark a contrast, suggesting force and style in relation to the space around it, giving coherence to the symbolism intended. The site was defined and its relationship to the landscape too; those who over the centuries had built on that site had simply continued the visual and symbolic effect of the whole, making the Acropolis one of the most poignant sites in the world.

Rome tried to imitate it, though it was not the same,

lacking the same inspiration, taking an idea and placing it elsewhere. Surely that is why, in Italy itself, there is a lot more feeling in the temples of Paestum than in all the forums of Rome [40]. It is here a collective vision was born in architecture, capable of creating its own concept of bringing together the surrounding environment and the edifices inserted into it. Centuries earlier, Egypt used different criteria in building its monuments, its sites were different, wanting to emphasize its architecture but lacking a suitable environment in which to insert it, where the unchanging landscape could absorb almost any form. It therefore decided that in addition to the size and volume of its monuments to use its own desert as the base of its architecture. They added immensity to their sites. It is why their temples, their funerary monuments, their geometric forms fit so well into the desolation of the landscape [41], it was not absurd, as would have been the risk of emerging in a permanent contrast with the indifferent flatness of the site. Almost the entire history of architecture is founded in harmony and contrast between the site and the edifice built on it.

Architecture is a human act, which seeks vigour and permanence and is, at heart, one of man's most enduring manifestations of power. In fact, whoever possessed or took power immediately fixed their objective on architecture in order that their ideas endured. The site is less important than power, the fusion with its surroundings is something we should consider as coming later, it could be said that it followed. In fact, power prefers superimposition to juxtaposition, there

41. Their funerary monuments, their geometric forms fit
so well into the desolation of the landscape.
The Pyramid of Keops, Giza

should be no doubt as to the importance of the action, architectural history is replete with acts of inspirational superimposition, requiring the removal of preceding edifices. Good architecture has always improved with superimposition. In fact, even in our time, as we shall see, the indispensable condition for the replacement of one form of architecture by another is that the new is superior to the precedent.

What, for example, could be built next to the basilica of Saint Peters? Only Bernini dared to do it, and he did it well, understanding the site with his usual genius. He could neither superimpose nor juxtapose it, or rival it in height, but in extension, drawing unexpected support from it and from the immense power of the temple, and still managed to add strength to power of the basilica, it was not easy to do that, no one else could have accomplished this. Because, without leaving the Vatican, we can compare the difference with others' talents when we examine the weak and unfortunate lines of the Via della Conciliacions, a vain attempt that sought to confront the architecture that preceded it without addressing its enormous power. It can serve as an example of how much something can be out of place. Generally, in architecture today when someone refers to the site, it is considered as one of the essential references that should be taken into account. At times the site determines the architecture and at others it is the edifice that transforms the site. We can of course find dozens of examples of each, but what we can transmit to the student is that, before anything else, when an architect

42. 'Why should an architect's work spoil the valley?'
Adolf Loos, 1870-1933

undertakes the development of a site, the visual references have to be taken into account. We shall now examine one of the axioms of architecture, concerning edifices and the sites on which they were built; whoever visits a site should at least be aware of the importance of that site's role. Without doubt, it can be compared to choosing a suit to wear, it is important not to go to an event dressed in yellow when others are going to be dressed in black, unless one wants to be remembered with amusement.

If it is a question of explaining an insertion, all we have to do is examine its effect on certain architectural works, works consisting of perhaps small clusters of buildings with reasonably balanced forms and with a certain harmony of line. What motivation is there for drawing unnecessary attention to them, when neither the result nor contrast can add to the advantages of the site? Up to that point an experienced eye is not required. Because neither neighbours nor visitors could easily understand why such an admonishment has been made to the site. Adolf Loos was emphatic on this subject: 'Why should an architect's work spoil the valley?' [42] he asked. This is the most obvious case of disparity between the precondition of one place and the insertion of an edifice.

In other situations, especially in cities, where contemporary buildings are found alongside those of the past, the result is the same. This is especially so when there are more new buildings than old. Size must be taken into account at the moment of comparison and

effects should be carefully weighed, however the method remains the same: evaluation of the surroundings, collection of visual data, analysis and conclusion. It is not be like a building on the Paseo de la Castellana in Madrid, where everything is possible, and where nineteenth century architects continue to dominate the scene, or in the Plaza Mayor, for example. The first is a clear case for total architectural transformation, and the second is that of inevitable typological form suitable for new additions.

No one doubts that each building should belong to its time, as it always has, but also as an almost unique visual asset on a site, taking into account an understanding of the integration of architecture into its surrounding milieu and that which has preceded it. The essential is that new buildings should never have less architectural value than those they have replaced and this cannot be done without taking into account an understanding of the existing milieu.

Here two terms that at first seem similar but in fact are not at all similar are introduced: visual presence and architectural presence. The first implies the past and the second the need. Visual presence is relative to the site as such; it does not need to prove anything, it was there before anything else. This could be considered as the substitution of different elements, which had gone unremarked or whose more noteworthy elements eventually appeared as a result of a change of use or better use. But, in both cases, not only the second, it is essential that the element adequately compensates its

43. An architectonic form capable of demonstrating that the
neo contemporary merits rare places.
Francisco Sáenz Oiza, The Bank of Bilbao, El Azca, Madrid, 1972

originality – its ex tempore negation – with an archi-
tectonic form capable of demonstrating that the neo
contemporary merits rare places [43].

Nothing should be taken for granted in
contemporary architecture. For sure designers realise it
when a contemporary building makes a poor figure next
to sound architecture, though it may go unremarked
elsewhere amongst buildings of a similar style. By
contrast, when contemporary architecture substituted for
earlier buildings succeeds in provoking emotion, the
result improves the site. That is because, though its
objective goal contrasts with that which preceded it, the
result disturbs certain persons, such architecture will add
a valuable witness to our time, and architecture permits
this. It is the comparison with the site that is of interest,
the subsequent integration on the site on which a
building is to be built[*]. Of course, none of this has

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[*]The idea of the site is one of the most complex concepts that confront
architecture. Admitting its inevitable volumetric condition and
assuming its spatial character, a site that an architectural project is going
to occupy is converted at the same time into a preliminary and
consecutive argument. All architecture has to consciously confront the
long process of incorporation of the site that will receive it; its presence
on the site will be a permanent change to the existing landscape. With
the site there is an intense component of intellectual accord, of cautious
approach or decided intervention. It is the concept of architecture as
director of a setting; manipulating it with the presence of foreign
elements that certainly will affect the results, a consequence of the
actions or thoughts that ensue. Can architecture impact the future site,
contributing an example of coherence, adding merit to what exists,
supporting or negating the past vision. Can the desire pass unseen, or on
the contrary, be remarkable in an unforeseen manner, and possibly a
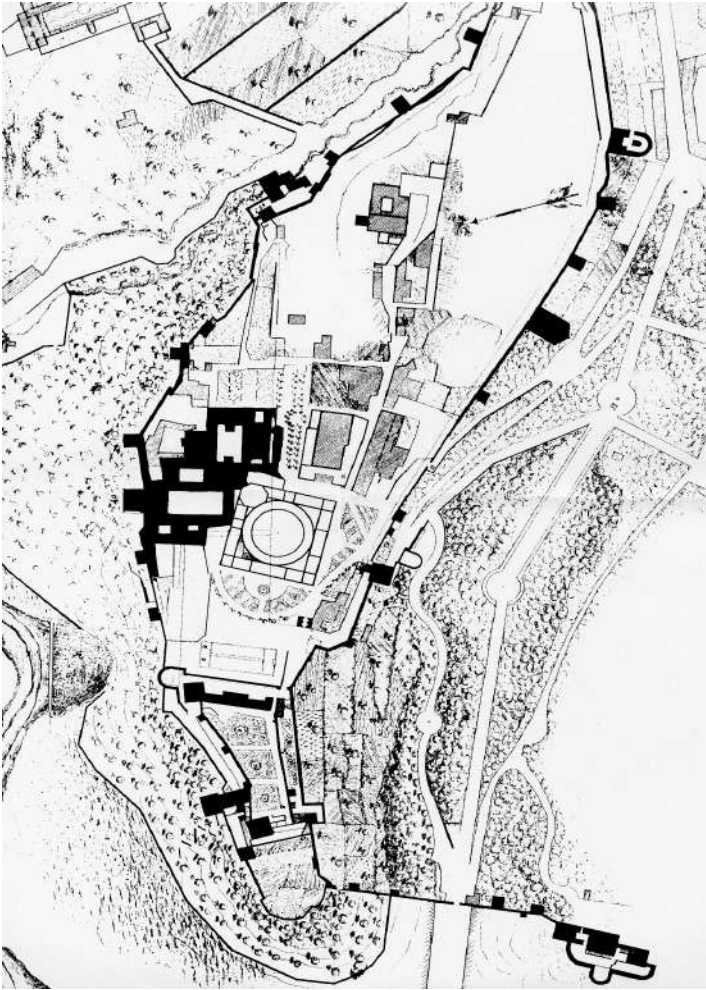certain failure to respect those who will live with it?

anything to do with the architecture in history, which everybody agrees has to be preserved and where possible saved. Historical architecture is untouchable in our times, many laws and safeguards exist to protect it. Perhaps these laws should be considered as preventing contemporary architecture from being inappropriately used? Historically architecture has always been superimposed, our cathedrals are clear evidence of that, no one has ever doubted what was modern, at each moment in history, it was accepted that historical architecture could be added to or changed. Adding Gothic to Roman, Mannerist to Gothic, Baroque to Mannerist, and even Neoclassical to Baroque has occurred over the last thousand years as a matter of course. There are hundreds of examples of ancient buildings that have been lost for the sake of the modern. Why do we protect ourselves from contemporary architecture today? Do we have no confidence in it?

In the past things were very different, it was not at all uncommon for new buildings to be put up in place of

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The most undoubted tendency of architecture is vanity, one of its most notable risks. Thus, knowing its inevitability; it is indispensable that an action plan should exist. Equally for the people who understand this, they should know how to get where they are going, and on arrival, know where they are. The unchanging condition of architecture has been the acceptance of its introduction, without having later the possibility of surprise or disappointment, on the site to be occupied in the future. On the contrary, when inappropriate work has been produced, only architecture is able to mitigate the discord. Its permanent, ostentatious, component will then have the required result, the gesture that reminds us that harmony can also reside in contrast, there is no disrespect in this, but the need to rediscover the site's value.

44. In Spain, there are striking examples of this way of doing things: the palace
of Carlos I in the Alhambra in Granada, for example.
Rafael Contreras, a plan of the Alhambra and Generalife, 1878

others, replacing them or adding to them. Perhaps certain talented architects like Alberti in Rimini, for example, acted with grace at times, but in general, almost none were willing to give too much consideration when they designed important buildings. On the contrary, when they were more outstanding, all the better; the world is full of examples like this and certainly great architecture owes almost everything that dominating attitude. However, there are some cases that allow at least some doubt; perhaps it was the brutal approach of the past which explains some of the contemporary caution vis-à-vis present day incursions. In Spain, there are striking examples of this way of doing things: the palace of Carlos I in the Alhambra in Granada [44], for example, which Machuca designed in Roman style over the delicate fabric of the Nasrid palaces – not in vain since his client was the Emperor, grandson of conquerors. No one could question the objective quality of that edifice; his gesture was arrogant and overbearing vis-à-vis that which preceded it and which could veil its merit. Should architecture be arrogant if a conqueror so desires it? Could our contemporary sensitivity accept such an attitude? However, there are many opinions; some of which seem commendable: if the building looked good, then why not build it so? Undoubtedly, that is true, but what if the appearance of the palace on this site was not really suitable, perhaps pretentious and inelegant, an orientation tending to spoil the whole effect. Then neither is it modern nor respectful.

However, the heirs of the first masters of the

45. The value of the site was transformed into one of the essential concessions
of rational modern masters.
Gunnar Asplund, detail of Götenberg's town hall, 1936

modern movement understood the architecture of their epoch should necessarily be acceptable, because it could not compete with the presence of great architecture and, in addition, had to take into account the presence of many more mediocre intellectuals and specialists than ever before, the value of the site was transformed into one of the essential concessions of rational modern masters [45]. And surely, Aalto was one of those who affronted these problems with great feeling, perhaps following the example of Asplund, when he undertook the expansion of the Gothenburg town hall. His buildings, which were extremely modern, sought harmony with the landscape, the materials, textures and colours of the surrounding environment, producing organic forms, drawing abstract references, which be could be interpreted as being those of the site. Aalto made the kind of intellectual effort that many of the early modern masters did not make when they laid out their architectural cubes everywhere, regardless of everything: climate, landscape or tradition, let alone that which already existed.

Therefore the site is a vital part of good contemporary architecture. There is no mimicry in it that can be spoken of, but since abstraction replaces realism, there are dozens of ways to be consistently intelligent relative to sites. It is not a question of saying something to justify its position with just a few clever phrases or some poetic references, perhaps with a few sketches on the kind of paper napkins we have already spoken of this; that is not architecture. And if someone is planning an

airport terminal in the shape of a dove, for example, this should not be considered as representative of architecture. Ledoux has amused the world for more than two hundred years with his self-expressive architecture, we can recall the place he called the House of Pleasure…. But in spite of all those who still believe that architecture is the result of intellectual effort, this cannot seriously be taught to students.

Perhaps the development of architecture, as has already happened for painting, has become saturated by overexposure. It is possible, however to find something new, the options can be an amusing and even shocking way to spend time doing something, but more than six thousand years of architectural consciousness cannot end up dying from laughter, it would be too ridiculous, we should confine ourselves to cautious smiles while waiting for something more interesting to happen.

And above all, we do not have the right to convey such uncertainty to students, as though it were something intelligent. Students should know that they have stylish techniques at their disposal, inherited from the highly constructive examples of the past, which can surely lead to intelligent and modern concepts for their sites. Foster took some years to produce this kind of architecture, his buildings are placed with ease in some unexpected places, but nobody laughs at them or do they find them inelegant or obsolete. It is not contemporary architecture that has reached a low point, it is certain architects who have their heads in the clouds, indebted to the consumer society that keeps them, using cynicism as an excuse for

their repetitive and supposedly intellectuals concepts. Undeniably there should be no place for them in architecture.

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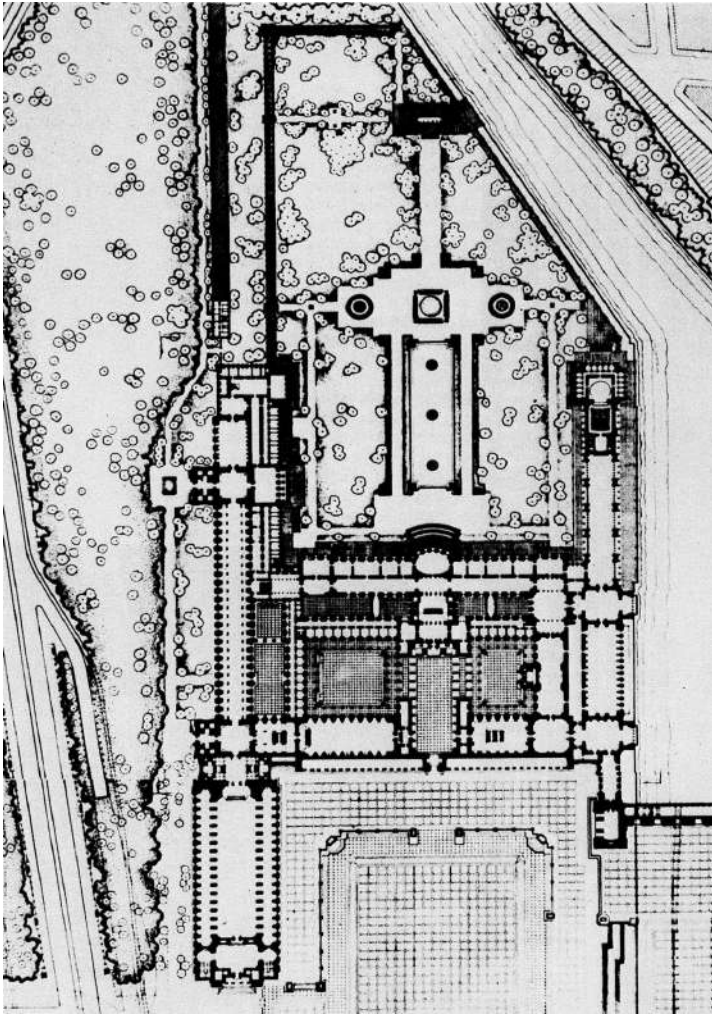
46. But when times changed, the justification of authority to excel through its
architectures had its first setbacks.
Albert Speer, plan for Adolf Hitler's palace [Not built]

PRESENCE

Our discussion of sites has already introduced a little of the concept of *presence* in architecture. Certainly, the role of a building on a site shows its relationship with this, the static position of something is equivalent to a permanent presence. Presence in architecture suggests first and foremost a style, a form of being, a consequence of what a thing really is and what it seeks to convey. Certainly the analysis of human behaviour is the best way of evaluating condition and existence, or presence, in architecture: what people make is what, ultimately, they are capable of transmitting.

Each epoch has always brought major differences in the manner of *being* in architecture. Thus, those who exercised power were naturally indifferent to the ultimate consequences of their works, nothing and no one could prevent them from exercising their will, such was their right. At the same time architects were happy to have the opportunity to express themselves without criticism. We have looked at Charles I and his palace in Granada, but his endeavour was almost irrelevant – we should not forget that the building of Machuca was an *intrusion*, not a *substitution*, hence its ability to contrast – if we compare it to others incomparably more splendid,

undertaken at the whim of emperors, kings and popes – complete demolition and substitution, which had no reference to the past, seems to us innocuous. But when times changed and people started to more or less count for something in contemporary in the social fabric, the justification of authority to excel through its architectures had its first setbacks [46].

Neither the grandiloquence of Speer's monumental architecture for Hitler, nor the appalling architecture of Ceausescu in Bucharest, or so many others negative examples built in totalitarian countries, have no justification in our time. But the same people who looked admiringly the great *Mausoleum* of Hadrian were horrified at manifestations of contemporary power. What would have been the reason for this difference? Has the justification for qualitative architecture ended? Perhaps we can find a reason for this anachronism, the inconsistency between imperious choices and the time in which they took place. Politicians and their architects should be very careful on this point, today the public people no longer accepts arrogance in architecture. Unless, of course, appeal intervenes and disarticulate economic choices override political choices. Nobody today would understand a large palace for a president - despite the French and Americans, amongst others, who took advantage of what already existed, using tradition and standing as an excuse - on the other hand however, it would not seem strange that the World Bank build a headquarters that exceeds its reasonable needs. Another thing is collective political buildings; parliaments,

47. It no longer constructs buildings for itself but for the people, even though it puts the same authority's names to them.
Renzo Piano and Richard Rogers, Georges Pompidou Centre, París, 1971

seats of international organisations or exhibition centres , which are often tolerated with pride on the basis of the erroneous idea that they belong to everybody. This is not so, they belong to authority, which in some places civilized has changed tactics, it no longer constructs buildings for itself but for the people, even though it puts the same authority's names to them [47]: such as for example the Pompidou Centre or the Francois Mitterrand Library. Is it coincidence that they are both in the Paris of Louis XIV?

In any case, the student should know that choices are taken whenever opportunity, intellectual coherence or the need for mandatory contrast is present: prudence as far as presence is concerned is a way of avoiding too many errors. This does not mean that when merit can be demonstrated it should be presented as of little value. If we decide to give a definition to presence in architecture, perhaps we could say: *everything according to its merit*, merit as defined by those who judge it, and not the designer. From this we can develop our method by verifying, perhaps, at the best, the principal, in a small space on the corner of an ordinary street where a new and modest building is built, without any particular distinguishing appearance, but for its capacity to transmit the vision that the street is different. Nevertheless, we must carefully weigh the usual and evident terms, needed for a well balanced result, so that things fit, the less common the street, the less apparent will be the building that conveys that vision. Let us speak of the form and of the influence of architecture. Both have much to do
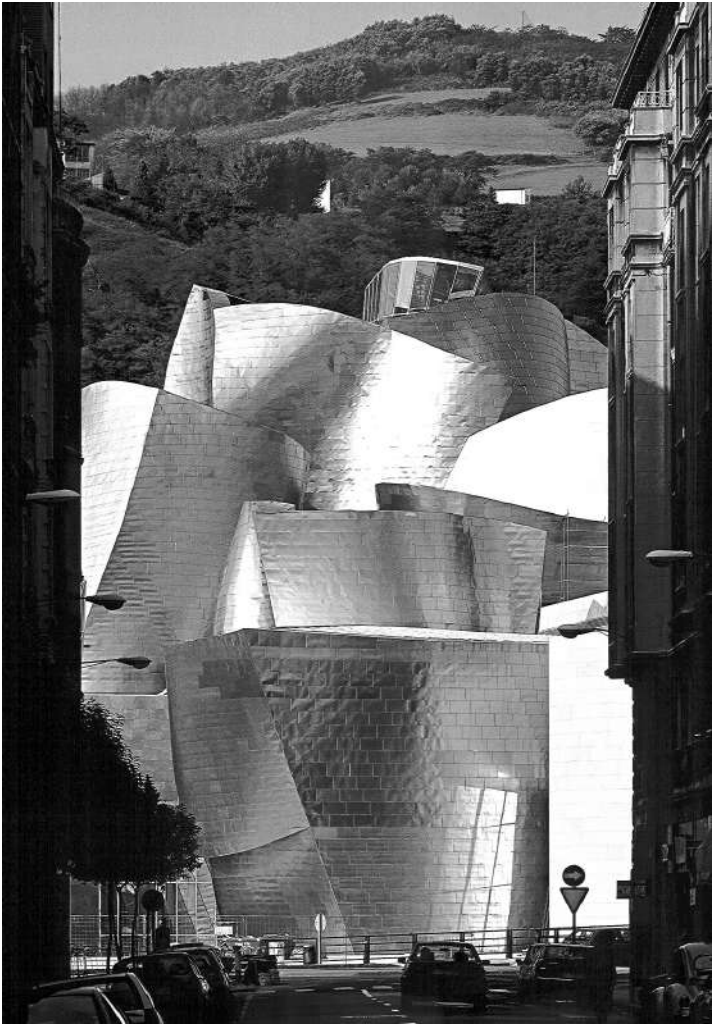
48. Nor could have Gehry been capable of paying for the software needed to
design and construct just one of the titanium plates.
Frank Gehry, Guggenheim Museum, Bilbao, 1997

with the presence of natural things. We have to underline the naturalness of the effect, we cannot seek to the achieve elegance we lack at the expense of adding cosmetic effects, the results of which would be dreary. Architecture of every age is full of such gesticulating examples, which try to be what they can never be instead of taking advantage of what already exists. To be precise this is a misrepresentation of architecture, a lack of self-criticism that encourages vacuous works on the assumption that everybody will be happy with them. But students know that knowledge is the foundation of education. Its criteria, when correctly applied, will prevent them from putting forward unnatural concepts.

We have already seen this argument has been one of the main reasons for the finest architecture that exists, security in sameness, rightly or wrongly, is unimportant if the result is not achieved. Why judge the reasons for things that are extraordinarily complex when everyone has their own ideas for achieving their ends. Thus, architects are very similar to people in power, since there has always been an effective symbiosis between the two, one without the other would have achieved nothing: neither power nor its architects took posterity into account. Because, students should know that architecture is the most dependent profession or art that exists, where the costs have to be paid by someone; architects cannot build for themselves, they can only design. They are not like painters who can paint self-portraits, or musicians who can compose a symphony for their children, or a poet who can write poems for his muse, none of these

involve any significant cost in their works.

At Versailles, the great Jules Hardouin-Mansart – perhaps the first stellar architect, with all his professional influence could have never been able to commence the foundations alone. Nor could have Gehry been capable of paying for the software needed to design and construct just one of the titanium plates [48] used for the Guggenheim. These are two present day examples and there exist many more remarkable examples in the classical world.

For us, presence in architecture should be of little importance for the moment, shortly the time will come when we can express ourselves with intelligence, as our learning progresses. It does not matter what we do as long as it is presentable, and presence, while being discrete, should not be at odds with style. Already we know that style is unfathomable, and as such has its risks. It could be that if we exceed ourselves, our style could make some smile. But that is not necessarily a stumbling block, because we have the certainty that this smile will never be transformed into laughter, our approach would have helped us avoid this. Against this background we should value the points in our buildings that denote a certain distinctiveness There are a number of essentials, both inside and outside: the manner in which visitors enter and are made welcome and above all, once inside, the development of horizontal and vertical lines, or unusual spaces, high points, perspectives, the site itself, its angles….

A building, in essence, consists of many small

49. Designed a series of incomparable architectural passages and interior
spaces that were as provocative as the amphitheatre itself.
Charles Garnier, 1825-1898.

things: the way in which it is positioned, the way it grows and its realization. The ancients of all epochs understood that, carefully foreseeing podiums and pedestals as bases, setting-up lines of columns and other elements on them and joining them together with ample cornices and entablatures. In entrances were placed porticos ready to receive people, passages that connected the exterior to the interior, and when they designed stairways, they did so after having prepared a suitable passage to reach them, so development should always have a precise purpose. In any building, the most important thing for its presence is the attention its appearance attracts on arrival, so that from afar, people feel the desire to enter into it, this is architecture, to enter a building after having felt the desire to do so from the outside. And then, after reaching the building, leading people where they want to go, following the path from the entrance to the last room on the top floor. Those interested in learning should fix that in their minds, discovering hundreds of such examples found in architecture across the centuries.

It is not necessary to recall the Villa Rotunda designed by Andrea Palladio, near Vicenza in Italy, as an example of knowledge related to a building's site. Many years later in France, Garnier, the most modern architect of his time, in building the Paris Opera, presented it with grand style facing the broad avenue that lay before it, designing it to receive the opera goers through a series of incomparable architectural passages and interior spaces that were as provocative as the amphitheatre itself [49].

50. Only in the entrance were there minor embellishments
and different materials, as if to attract people.
Gunnar Asplund, the Stockholm municipal library, 1926

In just a few decades, the early twentieth century Nordic architects, gave birth to an exciting new world of architecture, and modern as never before, with a perfect understanding of how to present their buildings, discreet and straightforward, using few contrivances, constructing buildings in places that were peaceful, extraordinarily and elegant wherever they were, uniformly decorated with plain regular lines, cornices and powerful lateral rainwater ramps.

Only in the entrance were there minor embellishments and different materials, as if to attract people [50]. Their buildings had the bearing of the Farnese Palace in Rome. Asplund knew that, his library in Stockholm is proof. And is so modern that it has no date, modern architecture has always been consistent, even if at times somewhat arrogant.

Years later, the *modern movement*, with its militant approach, also used this principal, a form of ostentation, weighing on the freedom of the appearance introduced in its buildings, an abstract component that in a certain manner of speaking, added a much more risky and less conventional composition. Gropius, for example, in his Dessau school, succeeded in the articulation of cubic volumes well adapted to the landscape, and which effectively appeared superb before it. Since then the concept of architecture has changed in relation to the site, although it was not in any case constant. Because in Bauhaus the path that it took led to an impeccable last room on the last floor.

We might now ask about the reasons for the

confusion that appears in a certain area of contemporary architecture, its lack of respect for people possessing little knowledge, its petulant posture for no good reasons, its empty gestures. We are very much concerned by the supposition – if we agree, architecture is always a transposition of tradition – that this kind of architecture is a result of the vulgarity of consumerism created by the system around us, as may be growing obesity or our progressive loss of skills and that this vulgarity is precisely what people may want. Have we changed so much in so little time?

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51. In architecture what is liked is that its elements go well together, that things match, that constructive systems are stable.
Ludwig Mies van der Rohe, 1886-1969

José Laborda Yneva

ATTITUDE

Our understanding has already progressed; we have discovered regular references to certain things or attitudes. The goal is to continue to examine those things we have assumed, perhaps naively, but which however are precisely those things that should be assimilated. But what if this was wrong? What if someone who wants to understand architecture had no interest in the invariable essential factors that have characterized it to the present? And if the influence of the traditions had come to be such that in a few years, not only society but also architecture and its axioms were been replaced by chaos without method or progression in which nothing could be demonstrated by reasoning? How can those whose behaviour is so completely inconsistent want a coherent architecture? Will we be teaching nonsense, in the belief it will be beneficial? Personally I do not know.

Certainly there is no going back, so our approach should be to continue a little further. It is not difficult to agree that the first axiom of architecture is attitude. Attitude? Well, we can change this name and call it something like *respect* relative to other things, even if is not exactly the same thing, or does not seem to have the same sense as what we are teaching in terms of approach.

This is, perhaps, a concession that we make to the concepts of *consumerism*. But, in spite of the fact that human behaviour has changed so much in so few years, few approve it or can ignore it, especially when it reaches a point that cannot be ignored. Because in architecture it is not liked either. In architecture what is liked is its elements fit together well, that things match, that constructive systems are stable [51], that a building is not visually antagonistic or non-functional. Well, that is precisely what attitude is in architecture: when two volumes, two spaces or two different materials are joined together harmoniously. And that, if anything, it is what is between them, a hint of fusion, a link that favours their permanent relationship.

This, and nothing else, is the coherent projection of form, the fluid disposition of space created, good architectonic construction. Everything together at the same time – form, space and construction – in one word: respect[*]. All architecture can be resumed by this maxim,

[*]The idea of the site is one of the most complex concepts that confront architecture. Admitting its inevitable volumetric condition and assuming its spatial character, a site that an architectural project is going to occupy is converted at the same time into a preliminary and consecutive argument. All architecture has to consciously confront the long process of incorporation of the site that will receive it; its presence on the site will be a permanent change to the existing landscape. With the site there is an intense component of intellectual accord, of cautious approach or decided intervention. It is the concept of architecture as director of a setting; manipulating it with the presence of foreign elements that certainly will affect the results, a consequence of the actions or thoughts that ensue. Can architecture impact the future site, contributing an example of coherence, adding merit to what exists, supporting or negating the past vision. Can the desire pass unseen, or on

preparing things in advance so that they match, it is easy. In architecture respect contains all the filters, the links, the resources that are demanded and knowledge of the behaviour of materials which serve those who know how to use them. That is why it is so important to look at things, learn and gather information, and know how to select the key elements. It would not be respectful, for example, to improvise or rush without preparation, without taking into account the conditions of volumes, forms, spaces or materials that we have decided to bring together. That is respect in architecture; it is the same thing as being respectful to others. Concerning our other considerations, we have progressed concerning our regard to the site and to presence. Nobody should feel uncomfortable with architecture, let alone feel incommoded by it. Form and function must be the result of reflection. There is no tedium in this method of approaching things, respect of form encourages the awareness of innovation, the opening of roads when the

the contrary, be remarkable in an unforeseen manner, and possibly a certain failure to respect those who will live with it?

The most undoubted tendency of architecture is vanity, one of its most notable risks. Thus, knowing its inevitability; it is indispensable that an action plan should exist. Equally for the people who understand this, they should know how to get where they are going, and on arrival, know where they are. The unchanging condition of architecture has been the acceptance of its introduction, without having later the possibility of surprise or disappointment, on the site to be occupied in the future. On the contrary, when inappropriate work has been produced, only architecture is able to mitigate the discord. Its permanent, ostentatious, component will then have the required result, the gesture that reminds us that harmony can also reside in contrast, there is no disrespect in this, but the need to rediscover the site's value.

52. Is it not precisely this that is most surprising in the interwoven spaces of
Ludwig Mies van der Rohe's works?
Ludwig Mies van der Rohe plan of The Square House

conditions dictated by the surroundings require it. As to the respect of space it should tend towards surprise, providing we do not transform it into shock. Naturally respect of materials is nourished by the ingenuity of design and invention, by recognising the needs of the people who use them. There is a whole list of means that can be employed to avoid people feeling uneasy with architecture: knowledge, reflection, consideration, moderation…. Sources are available to every one and these will help us to connect with the other axioms of architecture, which are perhaps much broader than respect: harmony and permanence.

We should realize from the start that *harmony* in architecture does not imply tedium, creativity flows from it, it is based on rational and audacious intellectual action, it is capable of experimenting when its vision progresses by anticipating the future, but doing so coherently. Is it not precisely this that is most surprising in the interwoven spaces of Ludwig Mies van der Rohe's works? [52] It could be said that they were *harmonious surprises*. There were also other *justifiable surprises in his disharmony*, contrasting intention and result, though no less beautiful in their commitment to harmony. Conscious disharmony is seen in the colossal examples of excessive power, as in the monuments of antiquity – in Egypt for example – with the intense non-functional contrast between container and content and its total lack of solidarity compared to its high degree of symbolism: only the chosen one, not the people, was the depository of the symbolic act. But we should not concern ourselves

too much with these examples, their coherence is in the contrast, the majority of them are good architecture, especially since they merit their continued existence.

There is much in the respect of the subjective, it is hardly possible to teach respect without understanding the circumstances and the finality of what we want to respect. Because if we were to choose a chronological order between things known to everybody could we say the catacombs were respectful? Is a Gothic cathedral respectful? Is there any respect between the appearance of the Bernini colonnade and its function? There are three examples of people meeting with a specific purpose, the exercise of their willingness to come together, although nuanced in each case by another specific factor: melancholy in the case of the catacombs; serenity in Gothic cathedrals and euphoria in the Bernini colonnade. There is much written about this, but it is suffice to say that, all these examples are models of respect in relation to its second inescapable functional component, an unavoidable nuance of the first. In the catacombs, although people could hardly breathe, there is harmony between their location, the complexity of the layout and the protection sought for those who lay there. In the Gothic cathedral, once the needs of worship were achieved, we see the ratio of the interior space   and purpose,   evocative of the magnitude of the spiritual compared to that of people. In the Bernini colonnade, built at precisely the same moment as the papacy's greatest splendour, there is proportion between its immense capacity and the huge crowds for which it was

53. In the Bernini colonnade there is the proportion between its immense
capacity and the huge crowds for which it was designed.
Saint Peters, Rome

54. The absence of self-criticism, inexperience, improvisation, vanity, and above all power without discernment.
Universal Exposition of Seville, 1992, interior of Italian pavilion

designed. [53]. In addition, we have also seen that there is no proportion between its size and its role as a powerful basis for the remarkable authority of the basilica.

Undoubtedly, proportion is an axiom that is much more abstract than respect, more debatable, it requires knowledge before evaluating it: objective knowledge about what we require and, above all, on our capacity for self-criticism. But, when we sufficiently well informed, lack of proportion in architecture is not possible; students must know that there is no excuse for its lack when its role and function is understood. Unless, of course, disproportion is the objective of the architecture we are planning. There are many cases of anomalies being called for, explicitly or tacitly, excessive actions in themselves, desired as such, actions that are deliberately experimental, where, like in automobile crash tests, architecture wants to test limits.

So are, or should be, universal fairs and expositions, so frequent today, the occasion for the presentation for innovative and attractive prototype models. What frequently happens is that these models are advanced experiments without real function and exceed the space desired. They then provide the rationale and flatter the vanity of those who suggest them, fascinating politicians and architects, and resulting at times in unworkable ideas. Then surges forth the concept of unconscious disproportion, both outside and inside, thus appears disproportionalities, such as one suddenly finds without knowing how to react. Contemporary archi-

tecture is full of such unexpected displays; each fits its place if one knows how to look. Could these buildings have been better? Certainly yes, but they too have their reasons even though they may not be acceptable: fashion, the absence of self-criticism, inexperience, improvisation, vanity, and above all power without discernment [54].

In the development of prototypes there are components that subsequent knowledge reveals as defective, thus in the same way as automobiles are tested architecture is also tested. But, surely, exhibitions have no desire in taking advantage of what has been discovered by scientists, not pursuing it, limiting it to brief appearances in reviews, then abandoning it to its fate and immediately beginning to think about the next exhibition with the same purpose. This suits consumerism, one exhibition after another, but architecture and people are not quite the same things: architects are disconcerted by this, and the people who have paid them barely understand what has happened. Surely, this is one of the most glaring example architectural consumerism.

Many of these buildings are the consequences of awards in competitions – for which we shall not go into detail here, competitions often resulting in widely varying shapes and forms – as a normal way to seek and discover innovative prototypes. Architects and politicians form part of this particular kind of game, each running after the other wishing to participate. For politicians it is essential to find solutions which contribute to enhancing their accomplishments, seeking creative architects,

whose talent can be appreciated by the avid critics long before their proposals are transformed into architecture. The minimum solution is a compromise – we should not forget that these buildings are almost non-functional – what matters is the action and, of course, price has no role, none of these politicians will pay anything out of their own pockets, because they are spending public money. There is almost never a constructive solution, though it is said that today almost anything is possible. Politicians and senior officials included, participate in these juries with other experts, critics and valiant architects, accustomed to knowing what should be presented in such cases, knowing only too well the different competitors, even those from distant places, all believing they know what is suitable for the site in question, going from one jury to another advising others what they should do. For their part, most creator-architects are eager to participate in such competitions and are familiar with the procedures, some are even specialised in competitions, presenting at times similar solutions for different sites, and of course, at times, getting it right. It is quite amusing that local juries and especially provincial politicians are so keen to entertain the public. Knowing some of the professional elements of these juries, it would be worth changing them from time to time when they participate together in different competitions. They know they could possibly win when they compete, since winning is proportional to the number of times they participate and the number of times selected. Basically they know politicians want a well

known name and the ideas that go with it.

After respect and proportion it seems important to pass on to the question of *durability* in architecture, an essential characteristic since the beginning of time, synthesized by Vitruvius in *firmitas*: in architecture there has always been durability. It is not the same durability as
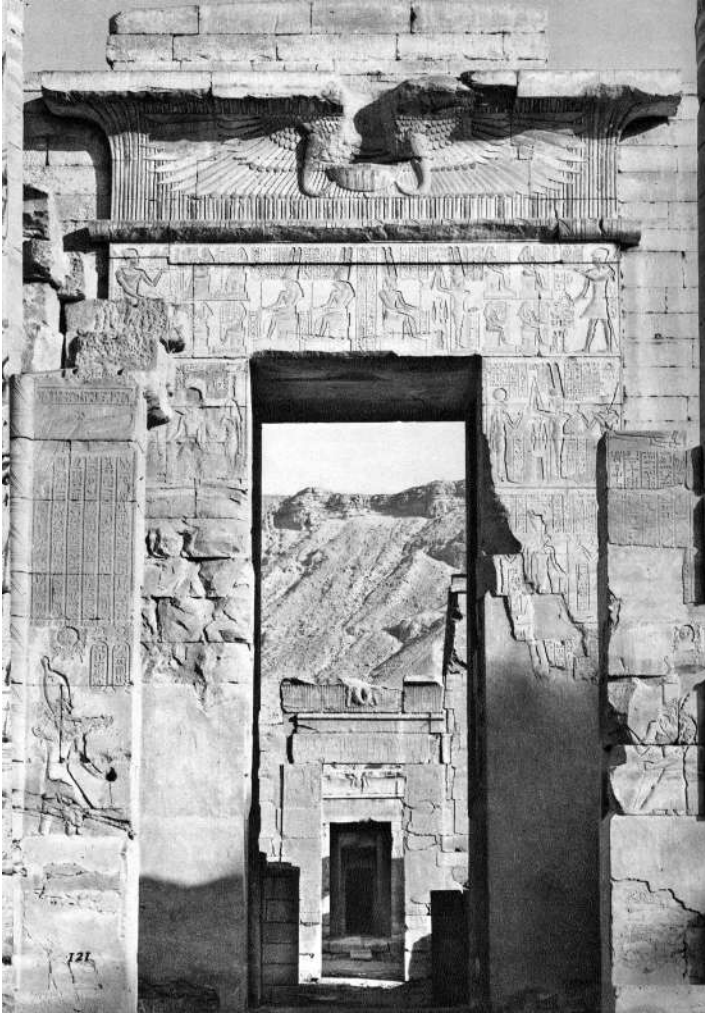
55. In the depth of things there is a whole lesson in spontaneity: the potential
depends on appropriateness, volume and depth.
Temple of Thutmosis, Medinet Abu

that of *firmitas*, neither that of respect in *venustas* or utility in *utilitas*. Our maxims are a little less obvious, perhaps something more elaborate. Much time has passed since the days of Caesar, hardly anyone would dare to define what today might be understood as beauty for example, in fact it does not seem to exist as such, it has been replaced by coherence. Nothing now seems entirely good or bad, it depends, however it would be too long to explain this here. But basically with a few other components, respect, proportion and durability are essential terms, like beauty, utility and durability: the complete essence of architecture lies in these three notions.

In any case, an essential component of durability is dimension. In the dimension of things there is a whole lesson in naturalness: the future depends on the encounter of a things just size and measurements. [55]. It is neither the measure of volume nor the measure of depth, the frontier between the two merges. Size validates the dimensions and the dimensions offer reason to the volume; materials do not accept a size different from their inherent function: if the size is insufficient, the results are weak and if excessive they are bulky and unattractive.

This is the modern concept of *firmitas*, as distinct from a classical structurally overabundant form. Indeed, in order that a thing has durability on its site without too much apprehension, it should have the necessary size. It goes without saying that based on this size, our critical consciousness decides to correct the dimension to give it

56. Without taking size into account, we used sparser forms, which was
no doubt a question of fashion
Kate Moss

a certain force or subtlety – each case should be carefully weighed – so as to attribute to an element the character that we believe it should possess. There are many without taking too great a risk, each case should be examples of this, not so much structural as perceptive: sizes that confer visual strength or a certain subtlety to elements that by their ability to contrast with other things or with a space, appear much more compelling for people or for the effects produced. Highway engineers are very different from architects in this respect, they are incommoded by an excess of size, even if at times they look the other way when they cannot do otherwise. In structural matters as architects, we are not over concerned by size.

Until recently we had the habit of seeing things more nonchalantly, without taking size into account, we used sparser forms, which was no doubt a question of fashion [56]. Thus, it is the same with contemporary styles, we believe that certain things should only be treated by intuition, to be precise the most difficult. It is as if we wish to deny the obvious, adding risk to what might be best resolved with a just few centimetres more. But today professions are like that, complementary, neither architects nor road engineers would be the same if they were the other.

However, dimension is just one part of durability. For a thing to last, in addition to having volume and size it must also be impermeable; another component of durability. The times of Vitruvius were different, there was volume everywhere but little was impermeable, air

and water could enter everywhere. Concerning impermeability, we must return to the question of respect and good construction materials as well as the compatibility of materials once we have decided on size. The important thing is not to fight impermeability as we will always be on the losing side, the nature of water and air is so subtle that it only needs a very small crack for things to go wrong. Here, compatibility is essential between interfaces, stability and flexibility which are all linked together.

Finally, durability has a third component: resistance. Materials should have the necessary size, so that they can be assembled with correctly, but at the same time, should be lasting, stable, as should be the interfaces. We all know the products that characterize consumerism, such as household appliances, have shorter lives. They are manufactured with that in mind. Initially designed with light materials and simple interfaces, and if too solid, they are then replaced by other materials with similar appearance but less solid [57]. In architecture the same thing occurs, it seems things that last too long should be avoided, or, if they last, they will require major repairs every twenty years.

It is not easy to advise students, so caution is needed, simply anticipating things as they should be is not sufficient and would be a fault by those who design the buildings in which we live and work in. Everyone knows that with better material things would last longer, but what about construction skills? Are experts in construction at ease with good materials? Or, perhaps

because we have lost the habit of using them we have forgotten how to use them?

Surely it is not a question of price, size and permeability can be anticipated in any coherent development of architecture, but the ultimate durability of the whole depends on the materials that have been chosen and the expertise developed by those who use them. For our part, we should carefully ensure that both are given the fullest attention, knowing as we do the limits. And never accepting defects be overlooked.

■

58. In them lies the synthesis of intelligence, purpose and opportunity.
PedroTeixeira, Plan of Madrid, 1656

THE CITY

W e are now ready to move along the street, which from the beginning has been of so much help to us, and penetrate into the complex world of the city, without doubt a vital component of architecture, the instrument of space, site and presence that are intertwined with respect, proportion and durability. Cities are the splendid, artificial, universes that emerge from our landscapes. In them lie the synthesis of intelligence, purpose and opportunity [58], a compendium of the successive actions that have shaped the needs of people so as to share their advantages, making their lives as agreeable as possible. No one doubts the drawbacks of the city, but at least in our world today, where the majority of the population lives, and except under unusual conditions carry out their daily tasks, it is hardly in our power to change this. There is a whole world of nuances between the convenience and inconvenience of living in the city, something which perhaps resides in the art of living itself.

Of course, it is not our goal to unravel so complicated a mechanism, only to be aware of it, applying method to this knowledge, making it a defining element, choosing a model, so that the student has a

starting point which he can modify to his liking. On this basis, anyone can consider the city as he likes: large or small, inserted in one landscape or another, in any country, with or without its own specificity, and a once inside it, can choose the place he prefers: the centre, a district or a suburb. Lifestyle is something else, almost nothing to do with the city, the site or distance, but it is important when deciding how to live. Lifestyle has to do with attitudes of each and everyone to things he finds at sites, from place to place; lifestyle almost always coincides with the way of being and the life that one lives, but that does not decide whether cities are rational or irrational, artificial cities or those we know nothing of [59], and hostile cities where almost nobody is feels at ease.

What is most important in a city is its form, the way in which it has maintained the knowledge and skills of its inhabitants from the time of its founding, maybe only thirty or perhaps three thousand years ago. Of course, the city's form depends primarily on those who have exercised with respect and diligence the tasks needed to accommodate its occupants, who have endeavoured to facilitate meeting between its citizens. The student has to remember that cities are the convergence and understanding between people, their actions and their movements. The city is always a result of the actions and attitudes exercised by its citizens over time. Any notable historical or cultural event becomes part of the city, in its form and its degree. People live, work, interact and go from one place to another in the city, functions that
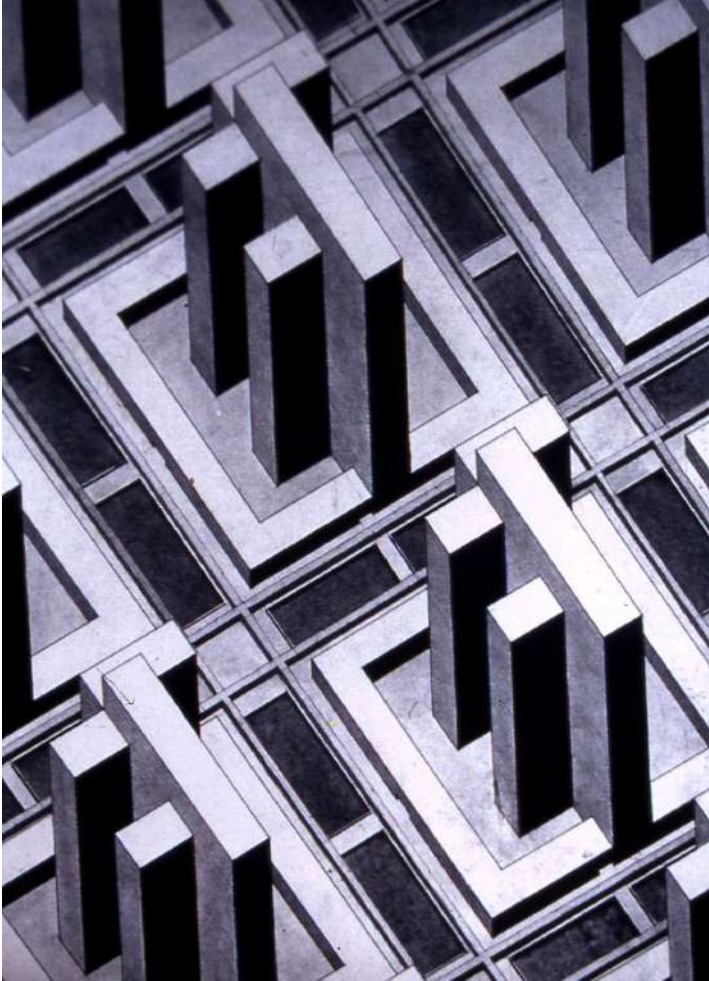
59. Lifestyle almost always coincides with the way of being and the life that one
lives, but that does not decide whether cities are rational or irrational
Cornelius van Eesteren, *Paris Business District*, París, 1926

require meeting, tolerance and means.

This can be our model city. Naturally an abstract model, since it is indispensable to have a model. But looking more closely, the complexity of the city and its quality as an evolving organism will prevent us from deciding on a single form, combining at the same time the historic city, the extensions and suburbs that any city has and thus obtaining a unique model that can serve as a base. We must not forget our objective is to learn, what interests us now is to fix our criteria, discover reasons that allow us to refine our ideas. Penetrating the relationship between a given situation and behaviour in an urban space, and in time to adapting a suitable model. What city can show complete coherence in its actions from its founding to the present?

We must choose, without ignoring why there has been and still are so many ways of being city. Our method is to assume that there has been coherence and rationality in the urban development model, as if sanity was an undeniable component of city government. It is not true of course; every city has enormous dysfunctionalities, coming from dozens of different sources at the same time. Just by looking at how errors persist and we will know that we are faced with an invalid model. Therefore, we can revise those prototypes the history of cities has to offers us and then use them after the essential prerequisites have been determined. Before there were ancient cities, classical, medieval, Renaissance, Baroque, reticulate, modern and contemporary; which should our model resemble? We

60. Contemporary cities accumulate progressively accelerated changes
that can hardly be regarded as models.
Gueorgui Yakulov, *Metropolis*, 1912

have to analyse these carefully, remembering that we are interested first and foremost in the city's ability to accommodate people, which is its original function; people in a city have to find the means for their individual life style.

Let examine the panorama, perhaps the best model can be a synthesis of the prototypes already known, an eclectic city in which each piece is interlinked with the other, coherent tangencies or overlaps, so that together they do not disturb the functional and living conditions that have given good results in the past. This has always been the desire of European cities, our cities: the links between time and form. Is there such a thing as a unique city? If so it does not seem easy to find. Whenever larger and more extensive acts of transformation take place, the greater is the dysfunctionality of the component elements, the difficulty of the connections between them are increased. Contemporary cities accumulate progressively accelerated changes that can hardly be regarded as models [60]. Therefore, if what concerns us is understanding the essence of a city that can be lived in, then we should look at the models carefully and calmly, almost organically, and we will have time to transform them in an increasingly complex development, it is the essence of the city that matters to us.

We must not forget that cities are for people, so we can suggest a fictional notion of an ideal city on which we can base our model with no people, there will be no place in it for works of art, this would come when we have already succeeded in creating a city where people

61. The relationship with the site, the supply of goods and services, the ability to
provide law and order for those who live in it.
Gdansk

can develop their lives. It is without doubt in medieval towns where students of architecture can find a satisfactory and stable reference to dwellings and functionality, without this being in any way exclusive. Knowing the arguments of the medieval city –peoples' dwelling places, homes in relation to the different functional possibilities – we can improve on them, but our approach should have a coherent basis. Thus, we can assume that the medieval town can be extrapolated to suit our own vision of a town, wherever it may be.

First and foremost, we must understand the medieval model was the result of a gradual and unprecedented development of intelligence in the service of instinct; medieval towns are the source of intelligent experience. From them we can above all appreciate their value, their capacity to fit into the surrounding landscape, their visual encounter with the milieu to which they belong. We must not forget that, beyond the cave, architecture is a voluntary and premeditated undertaking, and the city is the conjunction of organized undertakings through which architecture develops and endures. With the objective of durability comes the essential factors relative to all cities; the relationship with the site, the supply of goods and services, internal and external connections, the ability to provide law and order for those who live in it [61] and the possibility of continuity and improvement over time.

Surely, when a teacher wants to begin to explain the reasons for the city he should do so from the standpoint

of its inhabitants. It is not a question of tracing geometric lines – inorganic and therefore probably arbitrary – but to analyse the relationship between the needs of people and shape of the city, and its size. In this case, medieval towns were more effective than ancient Greek and Roman towns, more humane, more coherent and more architectural. Because, basically, cities both classical and contemporary and all models based on them – perpetuated today by orthogonal lines, from New York to Barcelona – define the sites immediately, almost forcing themselves on them, superimposing their networks everywhere. The result is a certain indifference, the identity of the inhabitants is not guaranteed in these grid-like cities with their rigid lines. They are basic and urgent cities, malls rigidly laid out on their sites, with matching empty public spaces. The medieval town, however, is organic and complex, individualized, the sites of things are there because these things are necessary, not because someone has planned them with a yet to be proven merit.

We have already said that if we were capable of understanding the street, we could understand the constants of architecture. We have now discovered that if we understand the medieval city, we can appreciate the constants of the blending of architecture. We could even advance one of our simple definitions for the city: *each thing where it needs to be*. It is not simplifying something for simplicity's sake, it is that something which can be greatly simplified if it is studied with care. And since we have become experts at observation: we have observed cities and their functions. Do they

function as they should? Do they have the appropriate size and scale? Are people comfortable in them? Medieval people were exposed to almost every kind of hazard. They were experts in suffering as little as possible; they had discovered that some other things were better together if used properly. It was intelligence applied to the natural condition of man, instinctively ready to live.

So in the medieval city each element had its place, a place that, in general, was merited. Step by step, the functions of our city will be tailored to that essential condition, that is to say merit. As a result, the function defined the site, the extension and presence each element merited. Surely this axiom could be applied to contemporary planning, from which comes form. And that which in medieval times was an appropriate principle for the ruling classes, will now be become relative to the order of work, the site, its size, its relational capacity and interfaces.

Work brought people together; like trades prospered collectively, people learned more from each other, ensured their labour had a higher value. Under this stimulus all that needed was bartered, bought or sold in exchange for their work. It was the expertise of people within the city, the original concept of the city quarter, intimately connected with trade, service, communication and connection between people. When people needed supplies, they came to the market to sell and to exchange their goods for what they needed. The stability of labour and trade was guaranteed, each forming part of the

62. We understand the reasons for cities, the reasons for their form, we also know their scale, their sizes and their positions.
Bologna.

overall business environment, with their equals and associates, even participating in festivals as a result of their ultimate prosperity. This is precisely what contemporary cities have to offer: the balance of their different activities. Is this not another of the axioms of modern planning? We of course know that this way of looking at things is deliberately utopian; we could say that this way of seeing that does not take into account the human condition and its transformations. It is not important, it is a model what we have chosen and we know that reality considerably complicates it. Whatever the case, there are a multitude of cities like this in Europe.

Architecture has become complacent about this, its functions have become specialized and increasingly limited over time, and urban form has rationalized all city quarters. In this way streets have been formed, concentrated towards centre, less so on out lying districts: everything has its site. The market place was also a point of convergence; everything depended on the ease of access, but also on its ability to act as a meeting point. Squares were naturally formed and amongst them was the main square - an organic transposition of the classical agora, inescapable as a contemporary urban centre - considered the soul of the city. The *town hall* was normally situated in the main square adding to the prestige of the urban and social centre, serving as a reference point and inspiration for its residents. In addition the architecture of other specialized market places and squares was more apparent than that of

streets, which will be seen later, their importance required them to have more presence Some traders were pleased to live in market places, people found what was best there, the role of the square was to supply and sell goods more effectively. And then, when the squares were cleared, they could be used as gathering places or for celebrations. Is it not what cities seek today?

Step by step, we understand the reasons for cities, the reasons for their form, we also know their scale, the logic of their streets, squares and quarters, their sizes and their positions [62]. The symmetry of the medieval city responded precisely to what its residents expected to find in it, its links were articulated, public space was configured as a moving organism that moved backwards or forwards whenever necessary. We only have to change the scale to visualize an appropriate contemporary model, adding dimensions and proportion to what the city has always been. And then, when we observe the relationship with the exterior, at the points of entrance we find gates in the walls that surrounded the cities, precisely at the end of roads leading to them. The gates that protected the city were its vulnerable points, the most varied; around which were gathering places, places for exchange and negotiations, which for various reasons could not take place inside the gates, the business of the city was concentrated at these points. They were also the point of entry for many different people and things, including strangers who had to pay to enter; what was logical that visitors contributed to the upkeep of the city. Some cities became specialized as halting points on the

road, for travellers, those who needed to rest before continuing their journey. The specialization of the city was essential; traders knew it and went from one to another choosing the most interesting, selling their goods to its citizens. This is why the city, like architecture, had to specialize if it was concerned by its own prosperity, offering what others could not offer or doing things better than others, having within them suitable places for living and working, places to be and symbols that provided identity. Today any city that is successful needs to be attractive, specialized and well connected.

With regard to its existence, there were two essential focal points in the medieval city, both occupying prime sites, which in one way or another had similar purposes, roles that corresponded to the symbolic, that is the soothing of its citizens anxieties, both civil and spiritual. As a result symbolic sites were almost always emphasized and their edifices were grand and solemn: they had the capacity to inspire confidence and at any given moment the city's inhabitants could congregate in them. These were the subjects that preoccupied citizens, they demanded the highest quality of architecture, they deserved it, and gave a free hand to those responsible for it. Is this not precisely the goal of contemporary public architecture?

The real merit of things lies perhaps in the important differences between the medieval towns and what came after [63], including the towns and cities of our time. The dispersal of the city also contributes greatly to the dispersal of merit, losing the real
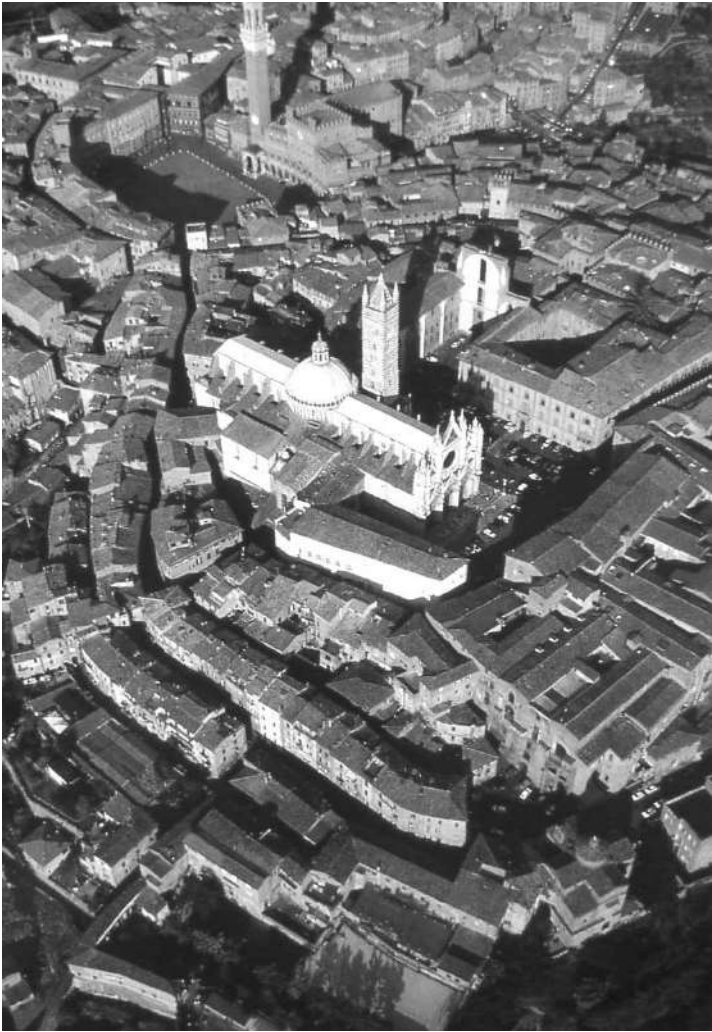
63. The real merit of things lies perhaps in the important differences between the medieval towns and what came after.
Siena

proportion of the dimensions of things. But students need to know the motivations behind what they see before them. However, as we know, choices are made by city builders, adding value and function according to individual judgement, but as size increases, this can mean being right or wrong. Because the city is also a question of size and scale; it should be exactly right, not more no less. When a city reaches a certain size and starts become unmanageable, and its advantages are lost, planners should decide to stop, and do better what they already know how to do well, instead of adding more things of little interest. It is much better to pass on to another city in another place instead of accumulating dysfunctionality.

Architecture is equally linked to regional development and the above notion can be found almost everywhere in the urban planning, wherever is occurs: *organising things in an orderly fashion*. We can thus define planning as we continue with our hypothesis. It is natural to grow, but there are also methods in doing so, it is not desirable to have a city that has reached the point of overflowing, when life becomes problematical for everyone, and not only for those who are already there but also for future newcomers. Regional planning is precisely this, to anticipate change and accommodate it in a consistent manner. What use is a big city that attracts all of the region's inhabitants, depopulating it to a point the region as such has no sense? There are cities that deserve to be big, offering a wide variety of life, with their climate and landscape, and their capacity for

interchange and accessibility, making them places of value with people able to go from one point to another, with their public spaces and parks where people can go when they do not live or work there, with their functional and vital needs being met. But there are other cities that only merit being what they are, that have not been able to transform themselves into prosperous and liveable places, they were not capable of attracting people and receiving them with respect. Those cities should not grow continue to grow, except at the cost of their population's distress. Precisely, these are the cities that have had the lowest growth; the growth they have experienced has been without reason, simply growing. Those who planned to expand did so without vision, plotting successive artificial radii and rings. Medieval cities never developed in this fashion.

And this is why when proportion is lost and size unduly increased, respect is lost, people do not know each other or want to know each other, the city is no longer a meeting place of common ideas and is merely an instrument which barely encourages the art of living. It is essential for teachers to apply our method for their students of architecture, and if it this concept is transgressed, then students should be aware of the consequences.

Perhaps merit has become an alien concept in our time. Practically everyone assumes that he merits almost everything, the merits of some overlap those of the others, leading to conflict, life becomes complicated when we all deserve everything. Cities are the same; all

deserve everything, and certain, despite being inhospitable and non-functional, want to grow rather than work to be liveable and attractive. But that is precisely what the consumer society wants, adding unnecessary needs, so that people become troubled when they do not have what they do not need. Equally those who hold the levers of consumerism control its progress, many live from it and live well, not caring about architecture or people, merely profit, it is they who refuse the value of things, in the knowledge, for the most simple of them, that things will be replaced by other things they build. Moreover, they are those who increase the size of cities when it is not necessary, knowing that this will evidently produce unnecessary dimensions and needless economic activity. Promoting growth, enlarging cities, rather than caring for them as they merit, treating existing architecture like broken toys on good sites, and again over time, or, if that is not possible, abandoning them to their fate, as happens today in many urban centres around the world. It is why the poor and disinherited take shelter in these discarded examples of architecture, as city centres are transformed into lifeless zones, instead of being what the should be, the vital heart of communities.

We could continue, but we have looked at almost everything, there remains the external image of the city, seen from a distance, an indication of the urban quality that we find inside. That too is a matter of respect, the vision that emerges from an inner logic, an attitude. Let us speak as we stand before the city gates, what one sees when one arrives, cities of today are revealed little by

64. Its circumstances will be draw from the force of its architecture
and when seen from afar imposing.
Florence

little, one penetrates into them slowly; there are no gates but suburbs. But before this, is the shape, the form of the city. Because, if we have succeed and everything is in its place in our ideal city, with the desired architectural presence, it will no doubt be the same when seen from afar, that is to say an overall image of those buildings that form the contours of the city.

Its condition will be drawn from the force of its architecture, and when seen from afar imposing, [64] in the same way as many of its buildings are when seen more closely. It is not sufficient to have a visible façade, there are at least as many sides to a city as roads that lead into it, there is no back entrance, the ability to convince must by anticipated by the city itself through its own image. And if our project has proved effective, the most beautiful image of will be what is seen from above, its plan, its buildings and open spaces, its urban concepts, its luminosity and shadows, its salient points. Our goal is to teach those who want to understand the city how to see it, teaching them to observe it carefully, with its architecture and its many facets. What better way is there to teach students how to observe a city than look at it from above?

We could insist on all these points, adding ideas to further reinforce our vision of an ideal city. It will not necessary, utopia should have methodology, we already know how the city should be, we known its method of assemblage, its relations, its collective expansion, of evocative symbolism: we have traced its outline. We have also looked at its form, from near and afar, its

relationship to its site, it is not vain to say the city is a compendium of architecture, we see it as a whole; we have created its model. We have also considered its capacity to transform itself, to grow, the possibility of moving forward without losing its appeal as a place to live. But where is that city?[*]

It cannot be found, it probably does not exist as such, we can only propose a model that offers the criteria needed today to create a city or add a city to an existing city. We know that our cities are suffering from stress, time has undermined their values. The involvement of well intentioned citizens has shaped urban form and the presence of architecture according to their criteria, though their good intentions often lack vital experience. The contemporary city is the result of such choices, even those that are capable of damaging the merits that those cities may have had. We cannot change this since one of the constants of architecture is its irreversible quality, especially once a city is already built. How can we best

[*]Concerning the relationship between the city and the landscape, there is a double sense to the environmental concept. Looking from the landscape, the city is provocative, unnatural, a superficial attempt at the accumulation of artificial and unnecessary superfluities, frequently hostile. On the other hand from the inside of the city it is the needs of man that count, his decision to survive, the association of purposes that permit him to develop his abilities. The landscape, contemplated from the city, is an object both utopian and artificial as is the city to the landscape. Again we should be capable of reconciling the harmony between these opposing visions, a singular respect. Since this is impossible we must chose and only scale is somehow capable of approximating this divergence. What would be the size of a city that matches its landscape? How could this landscape absorb the city so as to moderate its expansionist intentions?

65. How can we reconsider the objective merits of the
architecture that makes up a city?
Brescia

allocate public spaces? How can we reconsider the objective merits of the architecture that makes up a city? [65] How can we rebalance the distant outlines and the insertion of the city in its region? How can we improve the image of the city with the means we have at our disposal?

We can, however, become implicated in its future; extrapolating our ideas rationally learnt from organic cities, remembering that people are the essential factor in all cities, just as in architecture. There are multiple obstacles that try to prevent this, we will find a conscious ambivalence between what is supposed to be good for people and what our social and economic system is prepared to offer. We should change this system, perhaps we should remember Luis Lacasa claimed that we had arrived in the age of politics eighty years ago. Many things have happened since then; politics, as imagined by Lacasa, are increasingly further from the city and, perhaps, from architecture and people. How can we teach people architecture and city planning today, rather than growth and consumerism?

Antonio Fernandez Alba defined architecture *as the place where the merit of men resides*. Once again merit appears. Undoubtedly, teachers in the sixties, our teachers, understood merit as a consequence of intelligence, consistency and effort, as was transmitted by Moya, Sota, Fisac, Oiza and others. But language has always been the condition of equality; merit, for example, should be given to those who deserve it. Could it be assumed that contemporary society deserves the

cities that it has designed and not others? Does our attitude to consumerism mean that the city should be uninviting or inconsistent? Do the *merits* of today's politicians consist of having succeeded in building the place where they meet? Students already have sufficient evidence of this, criteria are always fixed for demonstrable reasons. But in knowledge has another side: knowledge that clears the road, once opened, to unexpected or disturbing places. Knowledge can however create uncertainty.

Architecture and the city should go hand in hand, whether the result is unexpected or disturbing, because the city is where the merit of contemporary man resides? It is therefore indispensable that the training of future generations of architects be based on the concept that architecture is a responsible support for the art of living, living understood as both a personal and collective adventure – therefore political. An adventure in which dignity is an essential component in any development proposed for the pursuit of progress and harmony.

■

66. Therefore, our method of teaching and learning has its origins in
something as evident as observing things.
José Ortega y Gasset, 1883-1955

José Laborda Yneva

SYNTHESIS

Howent, much the things in our world may appear to us as great and unfathomable, it is always possible to form a synthesis, and architecture, as one of the most extensive spheres in the behavioural intelligence of man, is no exception to this. We have discovered that architecture can be explained clearly, from A to Z, without using artificial explanations or incomprehensible terms. However, it would be a mistake if it was considered lightly. Architecture is therefore transformed into a fascinating result of real intelligence, not imagination[*]. There is no mystery in this proposition, simply the wish to present things clearly and with clarity comes understanding.

What has been learnt can now be reviewed. At this stage, it can be said that when what someone says cannot

[*]Since teaching is the subject we should again recall Luis Moya. For him, architecture and its teaching are the reasons and consequence of the times we live in, words that flowed naturally with the confidence of one who had known the path of doubt and the certainty of experience. His all enveloping teaching was a combination of knowledge, reflection, intuition and elegance, he was always disposed to listen and then transmit his ideas with the greatest clarity possible. With that Luis Moya combined an exquisite respect and an enviable capacity for surprise, there was a natural kindness in him, like his wholesome intelligence.

be understood, within the limits of contemporary comprehension, it is badly explained or they do not master the explanation or perhaps try to convey the obvious wrapped in confused rhetoric supposedly transforming it into something seemingly interesting. This also happens in architecture, when at times we find it difficult to understand what architects wish to say. Therefore, our method of teaching and learning has its origins in something as obvious as observing, looking at, what we see around us [66]. There is so much architecture from which we can learn and things to be seen. We began with the simplest, the street, where the architecture looms large with the intention of being seen. We can learn things from this that no book could ever teach us, commencing to know and relate to knowledge, our work has already begun, we already have the tools, words with which to compose sentences, and we can begin to express ideas.

Then there is the broad world of function and form, we will try to penetrate it, and we will do so beginning with the most obvious, lifestyle, the house, and the knowledge that the vital elements are driven by instinct. There is nothing more immediate than the house for students of architecture. Given the house is a question of knowing ourselves, we should carefully observe our actions and our habits, comparing them both with the ways others live, visiting as many houses as possible, from the most ordinary dwellings to the grandest palaces, carefully noting the differences, forming our own database of solutions, observing as much as possible

67. There exists in our time an explicit tendency to consider surprising and ingenious the way architecture links the past with the present.
Charles Moore, Piazza d'Italia, New Orleans, 1975

and noting all that we see.

We should understand all the functional worlds that converge in the habitat; it is a question of understanding the essential condition of man. Nothing has so many nuances than the human condition; how otherwise could we pretend that architecture adds diversity to the life of man?

Yet it seems that new architecture finds pleasure when it interprets what man had hoped to find in it, it is pleased to find ingenious solutions with the aim of discovering forms other than those man has known for centuries. It seems comforting that there exists in our time an explicit tendency to consider surprising and ingenious the way architecture links the past with the present [67], we seem to have discovered the essence of behaviour, and try to justify our actions with the authority that comes from the highest intellectual intentions of the former, although it is as recent as the *modern movement*. This is not convincing, a veiled denial of the present through its fascination for architecture which, in turn, should also be its justification. Surely, this has to do with the lack of certainty in our ideas.

But perhaps this is the moment to recall, for clarity's sake, that architecture functions with the means it has at its disposal, extensive material resources and building techniques that succeed in stimulating man's emotions. In architecture emotion stimulates emotions. These emotions are intense and collective, and very different from those that suggest, for example, music or

poetry when they are listened to in candle light. Architecture cannot be read in private, not even Adriano, an all-embracing collector of architecture, was able to do this, his suggestions invaded everything, destroying space, substituting it by his own presence. Nothing can make architecture less significant, on the contrary, it needs to excel and, perhaps, this intrusive condition sometimes diminishes the effect of its suggestion.

A building needs space and surface to say what it has to, hence its expressive limits, whilst poetry or music can suggest universes of feeling on just a simple piece of paper. There are lengthy theories explaining the capacity of suggestion conveyed by the arts: poetry or music permit intimacy and a diversity of pleasures with few resources, the intimacy of feelings are personal; other arts, however, seem to suggest less things with less intimacy, though anyone confronted by them or within them are submerged by their suggestions. This is architecture; it needs a site and material, intensely solid and suggestive. Every task and every technique employed to express the attitude of architecture are found in its relationship with man, with an overwhelming profusion of motives linked to his own condition.

There is just one step between understanding the human condition and the instinctive need to triumph over it [68], and the motivation of all intelligent beings resides in this. It is at the moment of desire, when limits are reached, the most intense stimuli emerge. And architecture is capable of expressing desire like no other art; its ability for abstraction transforms it into an
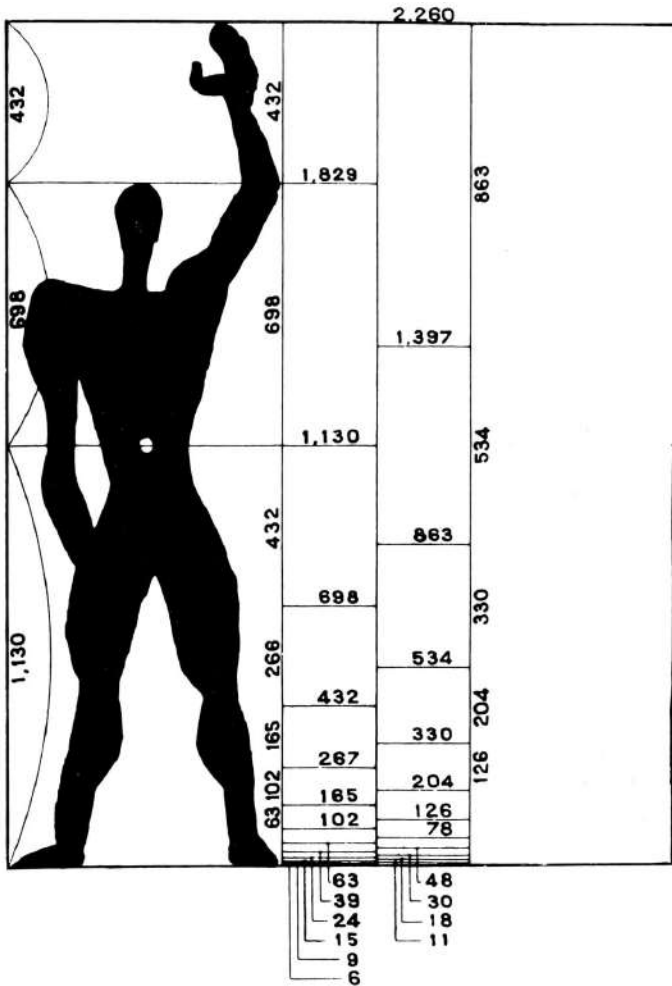
68. There is just one step between understanding the human condition and the
need to employ an instinctive approach to triumph over it.
Le Corbusier, *Modulor*, 1942-48

indispensable form of expression when man wants to go beyond his limits to express the inexpressible. So far, neither poetry nor music can convey emotion with the same sustained force as architecture. Architecture, understood as a link between men and their limits, is converted into an abstractconsequence of living, a symbol, which characterizes the vulnerability of man vis-à-vis his own insignificance. Is it necessary to live when we know our destiny? Do men need shelter when puzzling over the enigma of the symbolic? All spatial forms are found in the immeasurable relationship between shelter and the symbolic.

The house and the symbolic are only two consequences of the infinite variations of the understanding of space. We can well envision an orderly rhythm, to a greater or lesser degree, in our learning process. Gradually we have added the capacity of abstraction to our goals in the teaching of architecture: the street, the house, the symbolic and space. Thus from space surges forth ideas. Can architecture as well as being a profession be regarded as art? We have understood that observing, the desire to know, envelopes any expected stimulus. And we have seen that after observing, architecture, all architecture can be summarized in four concepts: the *street*, the *house*, the *symbolic* and *space*. Is there anything else we can add?

However, any concept needs a system in order to be considered valid, in itself abstraction is unable to build anything; such are intellectual concepts. But we also know that architecture, to exist, must be much more than

simply theory; a student above all learns in order to build. It is not satisfactory, however, that education tends to ignore the reasons for its existence; education cannot be effective if it inundates students with reasons prior to their efforts. The *profession of architecture* cannot be confounded with the job of *exercising* architecture, they are two different things: the former has to do with knowing, the second can be found in manuals. Those who really teach are above all interested in encouraging the profession of architecture, its way of being, how it functions, its reality.

Let us examine the prime material consequence of our particular process of abstraction, since it is a process involving material and volume. Architecture needs a site. There is a whole sequence of stimuli related to the site and architecture: accords, contrasts, suggestions and creation. These are abstract relations, but which form part of an intense desire to transform it into something concrete, establishing a relationship with the different tasks. Thus the student can progress beyond his initial abstraction, the architecture chosen will not be the same for different sites; location and architecture are two concepts necessarily linked.

And then, after the site, it is difficult to continue without addressing the question of aspect, a new and concrete undertaking that all architecture requires, form, the approach toward space and place, a new component derived from our main goal; the pursuit of the tangible, seeking the finality that the profession of architecture demands. There are endless ways to be present in a given

place, but the student should not assume that the presence of architecture, in whatever form, can respond to arbitrary or incoherent motives. On the contrary, the presence of architecture forms part of the final result of our apprenticeship, and if we have been attentive so far, how can we be inconsistent now, when we can take part in the work that we have waited for with such patience?

Oriental artists knew much of this subject, reflecting profoundly on their ideas and their ability to transform them into reality, imagining them with great clarity. Then, by an extraordinary movement of hand they transposed the ideas from their mind in a few strokes to the canvas with speed and precision. Of course, architecture is much less immediate, architecture cannot achieve things in a few instants, but perhaps the process leading to it, its presence can be assimilated from the methods of oriental teachers: knowledge, reflection and decision. We thus see before us the result of an intellectual process, the precise convergence of form and materials for a given site: location and aspect, the approach of architecture.

Again we can recapitulate our synthesis, adding to it the two newly discovered elements, giving us a total seven concepts to be used: *observation*, the *street*, the *house*, *symbolism*, *space*, *site* and *presence.* These seven operative concepts are part of an evident and subjective order, which for the time being, have led us towards our goal which is to learn. Perhaps this is a condition for teaching architecture, its heterogeneous order. The profession of architecture requires a simultaneous

69. Again we find the response in the observation of man and his condition, his ability to adapt, interact and his permanence.
Christopher Nevinson, *The towpath by night*, 1912

diversity, its variables are abundant and unrelenting, it is not possible to circumvent any of these, but nor is it possible to address them all at once. Can teaching propose a similar method? Probably yes, but it is necessary to find a relationship with what we should teach and how to teach it, something that has little to do with the profession. For complex as it may be, each profession should have a method of entering into it.

But perhaps it is the time to add qualities to concepts. What form should the architecture developed from our unorthodox approach take? Again we find the response in the observation of man and his condition, his ability to adapt, interact and remain [69] on sites wherever they are, as they are. Architecture is the same; we can therefore add the nuances that qualify its presence on a site, and then find a system that respects the relationship between one form of architecture and another, and between them and people. There is a natural awareness of this, a desire for permanence, there is almost never a wish for the continuity in disrespect, on the contrary however, disrespect tends to have a short duration. But one of the essential conditions of architecture is continuity, durability, lasting over time, which is acquired at great cost. How can a form of architecture be disrespectful when it has achieved its purpose? How can architecture that is disrespectful last? This is a new step towards the learning architecture: it could be said that being *is knowing how to be*, and after being is lasting, lasting naturally, doing so with poise and measure, without displeasing anyone, but without

apprehension, the result is that merit has the place it deserves, beyond simply being, which is to say lasting.

Things follow rapidly, this is precisely what nature is, the fluidity of behaviour. Perhaps the secret of teaching architecture is in naturalness, stripping it of all those artificial components that appear and have been added to it as layers over time, a consequence of its accomplishments. These layers form part of architecture's nature, adherences that occur when results are successful, everyone wants to do the same, adding their own wishes, some on top of others. And architecture will seek to protect its natural condition, then seeming hermetic. Any student should be capable of discovering the natural quality of architecture, its ability to last over time.

There are new concepts, our presence in architecture has brought us to *respect*, to *proportion* and *durability* as indispensable axioms, which architecture encounters as it should in the place it occupies. We do not need to be superhuman in learn the skills of architecture; we acquire them naturally, simply by observing things. We can already add these three new links to our synthesis: ten concepts that allow the architecture to be present on its site. But if we wish to confirm what we have already achieved, we should go two steps further, to earn enduring and lasting merit, we must add *depth* and *merit* to our actions. That will demonstrate we have attained our goal, our actions will no longer be hesitant or inexperienced – they will not lack effectiveness, and our way of seeing things will
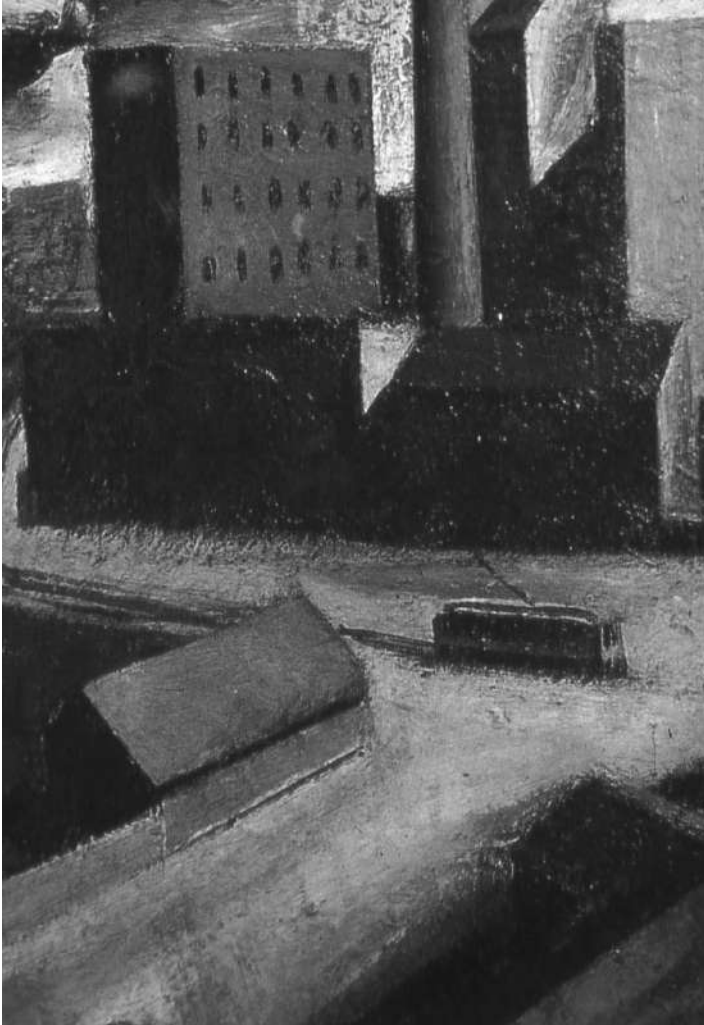
70. No city contemporary city can calmly accept its inherent contradictions
Mario Sironi, *Paesaggio urbano*, 1922

have made us more knowledgeable. It is the time of satisfaction, the moment at which any craftsman, we must not forget that we are learning a craft, feels pleasure in his work and is motivated by the use of an acknowledged method that distinguish him from others. It is the measure of time and experience.

Our apprenticeship is nearing its end, we are aware of the twelve essential components of architecture, we can progress to building, our buildings will be well thought out and coherent, assuming the needs and comforts of man, reflecting his faults and his merits. It remains only to fix the relationship between them, producing complex and stimulating creations, cities, the result of so many different and distinct ideas. We can apply our synthesis to the meeting of different forms of architecture.

We have already seen this is not easy, it depends not only on ourselves, it will not be repetitive or tedious, our architecture will encounter other styles that come from different stimuli and methods, reflecting the great diversity of mankind. There are, of course, successful models for cities, systems laid down throughout time for the convergence and continuation of coherent architecture. But, in reality, these models are beholding to fixed rules. Creative man however, does not tolerate rules, and does not expect to be subjected to them, simply accepting them as a system that allows him the expression of his free will and nothing more. Neither religion nor man's laws - the two channels that regulate human coexistence, have never fully achieved their

goals, the divergence of behaviour always exceeds any pretence of succumbing to instinct.

Method is something different, allowing expression, through conviction, not obligation, anyone can transgress it at anytime, it is organic, instinctive and natural. That is why our learning is reinforced by method and not rules, creating desirable functional, instinctive and natural cities with the objective of explaining how a city can be. There is method and conviction in these cities, there is experience and spontaneity, attention is given to the site and to merit. There is also dissent when errors are made; the need for man to be different, in addition to being and enduring, finding in them a refuge.

Our times are completely different; they are confusing, lacking method and overflowing with laws. What are our cities like today? No contemporary city can calmly accept its inherent contradictions with on the one hand, the absence of ambition, motivation, specialization, plans, [70] and on the other, an abundance of guidelines leading nowhere. How can we avoid creating confusion our cities? How can the conduct of the contemporary city be taught, it is impossible, only plans can be made, models be proposed and the consequences accepted. The city, the expression par excellence of the art of architecture, results in one of the unexpected enigmas of our times.

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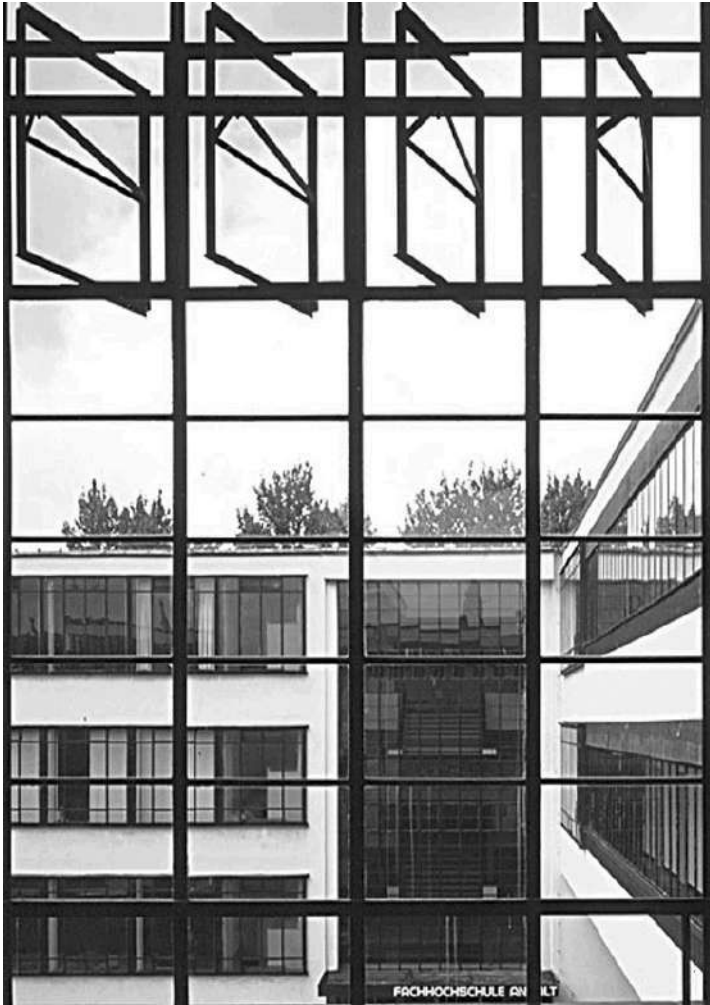
71. Architecture cannot be learned anywhere, it is essential that the place
where it is taught is appealing for the student.
Walter Gropius, The Bauhaus, Dessau, 1926

José Laborda Yneva

ILLUSION

W e are now ready to add to our method of teaching and studying architecture. The method accepts many variants which can be proposed according to the circumstances. After having discovered the essentials, we can add procedure to our method. Universities define this as programming and offer courses for the development of such programs. The ways and means come later and can be associated with any program or any teacher, they are flexible, so to speak, based on the experience of teaching and studying architecture, however, it is impossible that all be contained in a single program. In addition to the means we can propose a simplified method, the flexibility of which allows us to suggest it, avoiding issues and conditions that do not concern us. We cannot, for example, suggest anything on the subject of the programs or teachers; universities are there for that. Moreover, we have already discussed what can be learned and the form of teaching.

However, before entering the discussion on ways and means, we can perhaps say that to understand architecture, the place, the establishment and the city where it is taught should at least offer the student some of the constants that we now know are common to all

forms of architecture: presence, proportion, respect, merit and a vocation for durability. Architecture cannot be studied anywhere, it is essential that the place where it is taught is appealing for the student [71], and if his chosen subject is architecture then consideration to the place is extremely important. The place, in this case, has almost as much influence on the student as what is learnt; the place teaches by its example, like the teacher teaches by his knowledge. It is not easy to learn coherency in an incoherent place, it contradicts teaching, and we know that observing and seeing are the essential arguments for the transmission of the craft of architecture.

The ways and means are something different, organic, each depending on each other, there are no fixed rules, we can discuss them, again using the experience that architecture suggests. We can even compose a list of means along with our usual order of things, classifying them by group of affinities. In fact the means used in the apprenticeship of architecture can be easily synthesized; by simply looking at the evidence. We can put these into four broad sections, which are then subdivided: those relating to *knowledge*, *expression*, *accessories* and *procedures*. These ideas may seem abstract, but they will soon take shape: we need to understand the profession and be able to express it clearly; nobody can do it for us. What is possible is we use resources that help us to know and express ourselves, the supplementary means needed to add nuances to our knowledge. And it is naturally the method of learning, the process that helps to make things easier.

72. In this way we will meet other people who are also interested
by the same vision.
Fernando García Mercadal in the Academy of Spain, Rome, 1924

Before all other things the means that contribute to the *knowledge* of architecture depends on our own vision. We need to be attracted to architecture, even if we are not knowledgeable about it, be curious about it, verify what appeals to us rather than what disinterests us. This is essential; the major part of out initial curiosity is diluted by the fastidiousness of detail. There is a whole world of suggestions in architecture; it is not be easy for us to see them all, there are always nuances in the ways new emotions are provoked. Architecture is like that, always managing to excite to those who are really interested by it. This is the first of our natural means, *illusion*, with a completely open minded attitude. Concerning those who are simply looking at architecture for another reason or have a narrow vision of the subject, it would be end up by being simply unbearable for them.

If we proceed with our vision, what better way to broaden it than by sharing it? In this way we will meet other people who are also interested by the same vision, from whom we will learn more, we will be closer to them than our teachers [72], being able to see things that we would have otherwise passed unnoticed, we could perhaps surprise them with our own ideas, walking, working and learning together over time, developing our ideas and sharing with them our interest in architecture. And then, having reached our goal, those years and the people we have met will remain our most vivid references. Surely, then we will discover other things, even enlarging our understanding of architecture, since we are always open to learning things from other people,

73. In addition to the principles, our teachers will teach us about architecture's way of being and the possibilities it offers.
Frank-Lloyd Wright, 1867-1959

getting to know other people. Essential knowledge belongs to apprenticeship; however, it is not the same as the intense feeling of sharing a vision.

Of course we also learn from our teachers, but perhaps not as much as from our *fellow students*, or at least not same things. Our teachers will be the third link in the first section of natural sources, after vision and our peers. In addition to the principles, *our teachers* will teach us about architecture's way of being and the possibilities it offers with its established concepts, [73] which maybe important or perhaps inappropriate. It is imperative therefore that there is some distance between teachers and students in learning a profession; we could call this friendly authority. The opposite tends to unduly reduce the essential fascination that should be felt by students so that they learn. It is not easy to find teachers who are close but at the same time distant, who are capable of showing the way by example. Before it was easier to find distance, but there was rarely closeness. Now, excessive closeness has become the norm, it is not easy to convey the fascination that these teachers transmit. But it cannot be transmitted using a unique system or even à la carte, which unfortunately does not produce the hoped for results and students can end up knowing little. A lot of confusion surrounds this; learning does not include a system that teaches how to learn.

It is confidence in the knowledge that teachers teach, in other words transmit their experience. Teachers must know at the same time how to advise and correct what is appropriate for each individual, develop

ingenuity in those who lack genius, develop taste and expression in those who possess these qualities, knowing how to know the things that can be neither communicated nor taught, cultivating these when they appear. In principal we have covered this concept; teaching resides in guiding people, finding reasons in things and transmitting these reasons clearly. In order to transmit knowledge it is necessary to possess it, it also requires flexibility and proximity, without which the authority that guaranties that knowledge will suffer. Students should feel confident that what is learnt is what they should learn, and whoever teaches it knows what should be known and how to teach it.

But what precisely can be taught and learnt in the profession of architecture? We have already discussed this and we have suggested an unconventional approach, which can be applied in any form so as to understand the subject. We have also discussed specialists and programs, which needs no further discussion. We can simply say – without defining materials or even less disciplines – the *Project* should be the focal point of education in the study of architecture. Because any student wishing to understand architecture, wishing to plan and build, or teach it should refer to it. And in examining the project, studying it, we shall at once see what is required for architecture. We will find in it references to *history* and precedents that may be suitable for the effective understanding of the facts. We will also find theoretical concepts to support the intellectual approach required for projects, abstract components that are derived from

knowledge or feeling. We will appreciate the need to understand architecture as a source of *experience* on which projects are based.

Becoming familiar with the laws, never formulated but always used, which define the constants of architecture and its formal expression. Flexible laws that have nothing to do with the automatic recourse sought by those who suppose architecture is purely technical. However, there is always the *technical* aspect, naturally, for construction, structures and services that should allow systems and spaces to have viable functions, always closely linked to appearance, function and form.

The *form of a space* will suggest how it is used and not the opposite; it is not good enough to employ a form simply because we do not know how to do something other than repeating what has been always done. A project should be capable of reconciling the two, thereby enhancing its viability: that is project planning. Then, in addition are the questions relating to the *site* and its *environment*, *planning* and *regional* considerations, as well as *construction schedules*, *operational questions and costs*. All this is part of the project, and should be investigated as these are indispensable components of the end result.

Finally to all this we will add aspect, respect, balance, dimension and merit, concepts we already know and which, surely, can contribute to improving the project, and above all producing a coherent end result. These are issues that do not appear in textbooks as essential elements necessary to exercise the profession of

74. The vast world of books envelopes everything, information from every corner of the world.
Rem Koolhaas, Office for Metropolitan Architecture publications, OMA

architect. It is normal. They are only attained through work and experience, and experience is rarely found in textbooks. Therein lies the difference. Books also contain some of the things needed for the study of architecture and *books* will be our fifth natural means of learning, after *illusion*, *peers*, *teachers* and *projects*. But teachers must make it clear at once there is no single book in which everything can be found on a given subject, their scope is limited. It is essential to compare information, knowledge comes from the comparison of sources, in this way knowledge is acquired. Books dealing with architecture are often effective, but sometimes are arbitrary, as is the information they contain, let us not forget that architecture is nourished by the frequency of their appearance.

There should be an order for the introduction of students to their books; there are books before, books after and books from nowhere. And there are not only books after, there are those less sought after, indispensable to for a deeper knowledge of the subject, there are also specialized papers and studies, often outdated. Too frequently the magazines that deal with the architecture appear at an impossible rhythm and have the habit of presenting innovations, which is their business, they usually tend to try to surpass themselves with each new issue. For them it is normal, but they are a little difficult to follow for those who have not a great deal of time to read everything they contain; perhaps these magazines do not take into account their increasingly accelerated rhythms of publication with a belief that

news is more important than education, something which in principle is also expected of them [74]. The vast world of books envelopes everything, information from every corner of the world, unfortunately there is not enough time to know everything, it is vital to make a delineation between what is necessary and plain consumerism, there is consumerism in certain books, for which we have little time, they form part of the vast universe of manipulation in the dissemination of architecture.

We have agreed that our primary concern is with natural methods, those dealing with knowledge. Surely we could have found other alternatives, but in truth they can be found in any of those suggested. If we go further with our method, we will now find ourselves with expression, an indispensable factor in studying the art of architecture. Architecture before all other things is knowledge, but without expression it does not make sense, it lacks its extrovert component, its capacity to express itself before building something, the intermediate step between the idea and its accomplishment. There is in architectural expression two essential things, design and description. Because design, in the form of plans and drawings, does not always tell the whole story, plans simply present form and emotions. Architects often forget this, sometimes it seems that with plans everything has been said, not forgetting the endlessly discussions around them, not knowing how describe things without drawing them. Surely, those who speak like this have not thought it out before, are still halfway, as with those who disdain what they do not understand or what they do not

know how to do. It is essential that the student learns how to draw and write, and to that end also learns how to read. We are not talking of the books we have mentioned, but those specific to the art that transmit language, ideas and style. Architecture is but one part of the immense world of knowledge; how can we not be interested in architecture, at least part of which we are capable of understanding? Is there a place for inbreeding our small world? Will architecture be better if the only thing we know is architecture? Design and written expression in architecture deserves a separate chapter.

■

75. It cannot be doubted that our first approach to expression is drawing,
without drawing there is no architecture.
Robert Venturi, YMCA, North Canon, 1964

TOOLS

It cannot be doubted that our first approach to expression is *drawing*, without drawing there is no architecture [75]. However, we have to clarify from the outset that by drawing, architects understand the manual skill that has been able to express thought since man first discovered how to draw. It has nothing to do with computers - apart for those who think that they cannot live without using computers, in the same way as ball point pens are used for writing. We could even imagine the human race coming to a stop by simply switching off all our computers. Even though we find it useful, we should also consider that we are becoming more and more dependent on those who control the pace of our world through the media and information technology. Our education, however, teaches people how to be independent and self-reliant in their occupation and opinions, people capable of exercising their profession in all circumstance.

The contrary would be unfair, narrow and misleading, and could not be considered as teaching. And perhaps some of us may prefer that our world be somewhat slower as long we continue to be human, especially when we remember that beauty has never been

in the finer points but in the mind. Therefore drawing is essential and will remain manual, learnt slowly, the result of repetitive practice and the vision behind it. Drawing is not only making plans, as some people think, but developing know-how; in the form of ideas, lines, volumes and style. It is not necessarily to produce emotion in those who see them; it is not what architects are looking for in their drawings, nor confusion, but expression and effectiveness. We should give our lines intensity and serenity: our own style which will almost certainly not be the same as that of others even though it may seem to be. This is the skill of the architect, doing similar things, never the same, individual and unrepeatable movements, as people. We are not worthy of the people we work for if we cannot draw what we think, transmitting to our hand the ideas that we develop in our mind. We need to penetrate the space, see it without seeing it, drawing it from all angles, imagining its interior and exterior, changing its position to appreciate the effects. All this must be accomplished in the age of computers, we cannot deny this, computers can even do it much better than we can, but we cannot teach this concept to those who are still learning [76], there is no feeling in computers or no essential stimulation.

Thus, it is the basic relationship of man to man which matters, one of the essential conditions of architecture. And drawing does not mean lines that only we understand. Drawing is a universal language, in the same way as musical notes, which can be understood by

76. But we cannot teach this concept to those who are still learning, there is no feeling in computers or no essential stimulation.
Computer graphics.

any musician who reads them. In addition there should be proportion, perspective, purpose and elegance. The contrary is not drawing. Architecture cannot be carried out without be accompanied by clear perception and the subsequently efficient expression of space. This is the exciting process that allows us to view the three-dimensional components of a project; the impact of the proximity or distance takes form into account, the consequences of using one or another material, colour and light. There is a spatial feeling cannot be reached other than by a step by step approach, accumulating experience by observing, seeing, feeling and taking measure. The illusion is basic, essential, but it is also part of the necessary professional skill; skill is what distinguishes a professional from others, each one possesses his own. Emphasising all this may seem curious in our times, when all and sundry think they can do everything, but it is essential. Fortunately for those who really wish to be part of architecture at any price, there are teachers who do insist on the imperative need develop drawing skills. The survival of the architectural species is guaranteed. Not much more can be added concerning drawing, the important thing is to have ideas, knowing how to visualize them and draw them and making sure that the plans produced are a faithful image of what must be built, as accurate as possible, so that those who read them can interpret them.

The other form of expression is writing, which gives students a rare and precious added value, hence its merit. That too has its methods, it is necessary to know the

77. They will not be big, they cannot be, but soon we will learn how
to master the skill of freehand sketching.
A sketch of Zaragoza, 2005

value of words, their endless combinations, their different purposes, their rhythm. There is much more scope for expression in writing than in architecture itself, it is much more versatile, more malleable, and can be corrected without difficulty. Architecture is accessible when it is well described. Drawing on words is the best complement to drawn architecture. In addition, unlike drawing, written description is not essential for the exercise of architecture, but it is an added skill that increases the architect's talents. We can test this, writing down ideas, things that we have seen, brief descriptions of buildings or places. Reading a lot, being capable of reading with two simultaneous purposes in mind: understanding what we read and appreciating how it is written. Avoiding if possible translations and of course avoiding anything that is poorly written even if the subject is interesting. The habit of reading is useful, even if it seems like discovering something we already know. Discernment comes after, as we become involved in the fascinating world of writing. To correctly write what we think is just one step. It is not easy, nor is drawing, but it is worth the effort. Is is possible our apprenticeship enables us to understand, draw and explain architecture?

On the subject of expression there is a third support that can greatly facilitate the development of what has been discussed, a simple and positive tool, with no special obligation, accessible to everybody. An extraordinary and useful support: a small and simple notebook with plain white pages. Surely, a teacher can rarely suggest something so practical. We can improve

78. They will be useful, an invaluable source of knowledge,
memory and study.
Rome's skin, **2001**

our work considerably with our notebook by making sketches, adding details, ideas, simple notes, sentences and paragraphs describing what we see. It should be a fixed leaf notebook for writing in ink. Initially this will be used for experimenting. Little by little everything can be discovered on the different sites we visit, conveying the details to the notebook in our own fashion with words and sketches, which will become increasingly precise, paragraphs that describe things more clearly and concisely, sketches that will have better proportions. They will not be big, they cannot be, but soon we will soon learn how to master the skill of freehand sketching, and we will end up drawing the world [77]. Ideas, details and things that interest us will fill our pages, and after a year we will have accumulated several such notebooks, we can compare them with each other, check our progress, and our learning will be summarized in them.

There are, of course, other ways to achieve something similar, especially with photography. But it is not the same thing, each medium has its purpose. *Photography* conveys the objective reality of things, whilst drawing and annotations are essentially subjective. However, photography is also essential for those who want to understand the art of architecture. We have therefore commenced this chapter of essential tools by adding knowledge and expression. Photography is also an expression and we must consider it as such. But if we know how to look, photographing what interests us and its enlargement is something of immediate use. Our
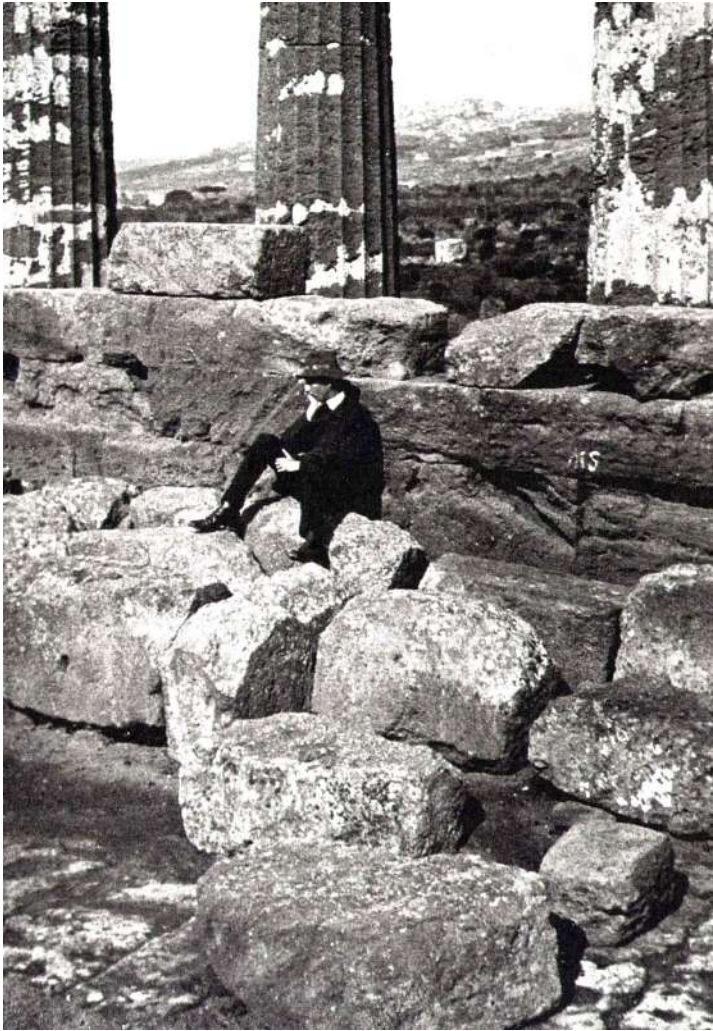
79. We grow with travel and our ability to relate to things is greatly reinforced.
Gunnar Asplund in Paestum, 1914

archive should be filled with photographs of different buildings and sites arranged in a precise order with their respective descriptions. They will be useful, [78] an invaluable source of knowledge, memory and study, constituting three of the essentials aspects needed to fix time, space and form.

Of course, our next tool is *travel*, which is of course linked to the two previous tools. Souvenirs always need some form of fixed memory: notebooks and photographs, which are indispensable tools to be used by those who travel in search of architecture, this needs no explanation. But, looking at the second aspect concerning the tools necessary for the study of architecture, travel has a distinct objective, besides those which are obvious; travel becomes a distant prolongation of reality for the student. We discover that whole worlds of architecture have been discovered and understood simply by looking at them. Travel should be well prepared, knowing where to go, choosing what to see, we should not pretend to be able to go everywhere, and of course our return. We will see much more than expected: other streets, spaces, forms, values, different ways of saying the same thing, things we already know. We grow with travel, our ability to relate to things is greatly reinforced, it does not matter if we spend a lot of time on the same thing or the same site [79] or return the next day, looking at it during the day or night, sketching and noting everything that we see, until it is ours. The most useful impressions for any student of architecture comes from travel, and also the most indelible. There exists a

complete world of travel to discover and as we know travel educates.

Another indispensable resource for learning any craft is practice prior to its exercise. This work has attempted to introduce to the serious student some of the many elements necessary for the development of their understanding of architecture, but it is nevertheless a precondition that must be reinforced by real exercises, with as much practical work as possible in the craft. Practice is a necessity and should be included as one of the fundamental principles in learning with the same importance as educational travel, though in different ways. Indeed travel puts things within our reach, things that are far away, and practice allow us to move closer to reality. And it is certain that practice is the constituent act that envelopes the entire concept of all work separating it from mere accessories, therefore an indispensable tool. A careful and calculated act, we could call it, especially if those responsible for training will admit that it is of real educational value and not a yoke. We should take this into account, we should forego practice where there is no responsibility, since without responsibility nothing will be learnt. Practice introduces the real world to students, a world that is completely different from that of the academic. For as much as our learning has been motivating and objective, it is only responsibility that adds realism to it. But we must know that moving forward little by little; a few more inches more than we think possible, that controlled risk forms the path of progress. If we succeed in this we shall learn more and
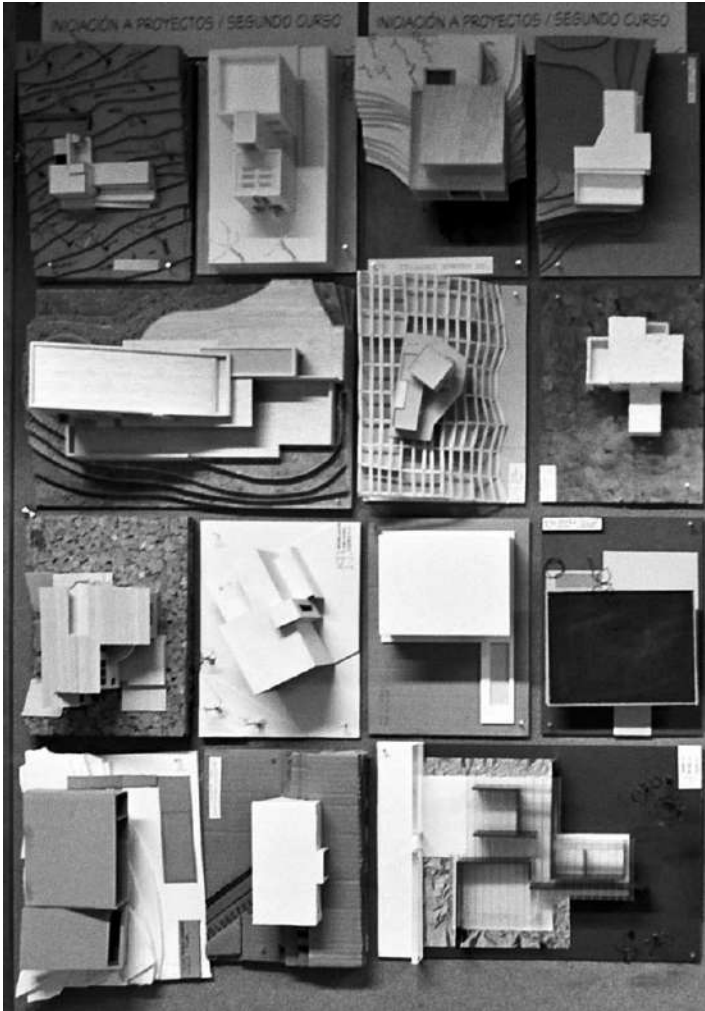
80. Equally important is the presentation of results before they are finalized.
Student's Project models, Zaragoza, 2006

more, but we should also realize that we will come to a point where we should not go too fast in believing we know everything. There is a moment of danger that comes when students start too quickly, in the erroneous belief that anything is possible, and then make mistakes. Learning through practice should refer to both involvement in projects as well as in their execution, it is essential to combine the two conditions with knowledge flowing as it should: passing from ideas to be sketches, from sketches to plans, from plans to construction and from there to architecture. There is in each of these four steps a whole collection of degrees and decisions, large and small, indispensable for real and practical knowledge in the art. This cannot be explained in detail, but it is recommended that this be included in all educational programs relating to architecture after the completion of the introductory courses, and with at least two years of real practice. This is often not the case, probably because there are other priorities. At this point our ideas on practical work close the heading on additional learning tools. We should now refer to our final recommendations. Final? Perhaps that is not the word, but it is time to finish although there are so many things left to say! It is not a good thing for teachers to tell students everything, not because they do not want to, but because they believe they should not. Students should learn to find their own way, excessive aid always leads to weakness when progressing from theory to be reality. There are dozens of recommendations that could be added and all kinds of precautions for the student. But

81. Everything then starts to fit into place, everything becomes possible and natural, as it is for those who live in the world of architecture.
***Mon Oncle*, Jacques Tati, 1959.**

surely all such recommendations can be summed up in an idea, which is: *things are often not what they seem*.

We can therefore continue with methods finally arriving at systems; *procedures* to enhance learning. The end result will be that the methods we have developed serve for learning and continue to do so. These are related to a critical approach and analyzing work before its finalization. Subjectively we already know that self-criticism is essential, but this has nothing to do with timidity but rather prudent resolution, as our method demands, equally important is the presentation of our results before they are finalized [80]. Other people should be able to comment on our work; by *people* we mean those who are experienced and responsible. We can all learn much from this, anyone should be able to comment on what others do, as others have done before with our work, teachers should moderate these sessions without excessive interference.

This results in the final component of expression, publicly defending work, with the dual purpose of teaching how to present an *argument* and the ability to *respond* to it. The many distinct phases of our apprenticeship should be followed through with a critical process: ideas, drawing, description and defence. In this way we cannot be mistaken. And then, when private criticism amongst equals has been carried out and everyone has acted accordingly, the work should be presented publicly, so that people, one and all, can voice their opinions with their *suggestions* being carefully noted down. Public criticism is not the same, there is no

defence or reciprocity, it is another process. We will however know what other people think, this is essential, we will learn a lot if we put ourselves in the place of those who will live with our architecture, they are the recipients of our work, and we should remember the tailor's adage. It will be impossible for everybody to appreciate our work, but we will be given invaluable ideas, thus continuing to learn. We note once again that our method is one of successive approximations: building our knowledge, working well, employing caution and making lucid decisions, submitting ourselves to criticism from those who are more knowledgeable and being open to suggestions from those who are less so, but seeing things from the public's point of view.

It is necessary to temper this somewhat utopian vision, concluding that perhaps all this has been a bit long and certainly naïve at times; the student knows much more of than the teacher can suppose. Unquestionably teachers should note that things are often not exactly as they may appear. We know, as was stated at the beginning, every person has their own way of explaining their art. A specific vision of architecture has been the inspiration for this work, transmitting that vision, defending the conviction that teaching and learning architecture is possible by observing the things that should be seen carefully together with their implications. Everything then starts to fit into place, everything becomes possible and natural, as it is for those who live in the world of architecture [84].

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: eſte tercio es
lo que ſube mas la cabe
ça q̃ la frẽte:el pecho cõ=
tiene otro roſtro : el eſto=
mago haſta el ombligo
otro : del ombligo haſta
el miẽbro genital ay o=
tro : en cada vno de los
muſlos ſe miden dos : y
en cada vna delas eſpi=
nillas otros dos. Delos
touillos alas plantas vn
tercio:enlas chuecas de
las rodillas otro: enel pe
ſcueço otro tercio.de ma
nera que ſe mõta por to=
do los dichos nueue ro
ſtros y vn tercio ſegũ q̃
por la preſente figura ſe
mueſtra. ⸿De muchas
maneras ſe puede medir
los miẽbros y eſtatura dl
hõbre allẽde dla q̃ haue
mos dicho. Ay enel alto
del hõbre ſeys pies dlos
ſuyos. Ay quatro codos
Ay del punto dela coro
nilla de la cabeça haſta
lo mas baxo dela barua la octaua parte de ſu eſtatura:deſta
coronilla haſta el nacimiento dela gargãta vna quarta par
te:deſte meſmo lugar haſta lo mas alto dela frente vna ſexta
parte. ⸿Contiene otroſi el ancho del hombre/de coſtado a
coſtado/la ſexta parte del alto: y del ombligo a los riñones
la nouena parte:
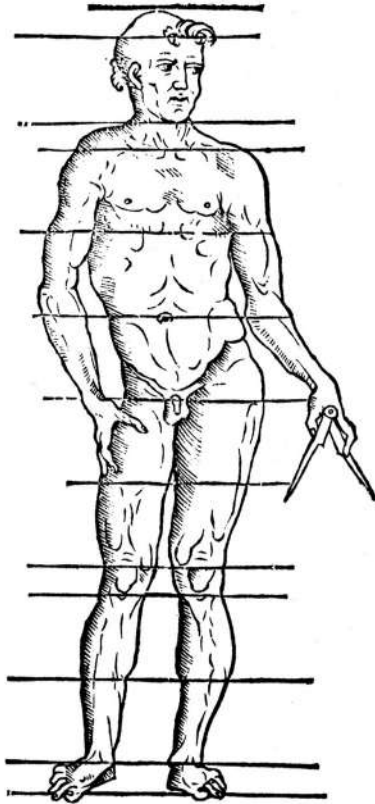
Diego de Sagredo, *Medidas del romano,* 1478

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ILLUSTRATIONS

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