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**LESSONS
FOR STUDENTS
IN ARCHITECTURE**

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6 FUNCTIONALITY, FLEXIBILITY AND POLYVALENCE

In functionalist architecture the form was derived from the expression of efficiency (which did not automatically mean that all functionalist architecture was equally efficacious). In the 'functional city' and 'functional building' it was the differences that were particularly manifest. This amounted to an extreme specification of requirements and types of utility, which inevitably resulted in more fragmentation than integration, and if there was anything to which these concepts were not resistant, it was time.

Actually, the good functionalists, preoccupied and indeed obsessed as they often were by their 'international style', managed to avoid the usual pitfalls, and most of their airy, white cubic buildings are in fact suited to multiple purposes. But especially the so-called functional urbanism gives a very clear demonstration of the extent to which thinking about solutions to architectural problems has been hampered by segregation of functions instead of integration. The rapid obsolescence of all too specific solutions leads not only to disfunctionality but also to serious inefficiency.

Just think of the parking garages with sloping floors, which are still being built on a large scale. This may well be an inexpensive and easy-to-construct system, but you can never use the building for anything else, if things change - in a period when far fewer people own cars, for instance.

Flexibility became the catch-word, it was to be the panacea to cure all the ills of architecture. So long as the design of buildings was neutral, it was thought, they could be put to different uses, and they could therefore, in theory at least, absorb and accommodate the influences of changing times and situations. That at least would be one point gained, but neutrality in fact consists of the absence of identity, in other words, the lack of distinctive features. The problem of changeability, then, is not so much a matter of having to adapt and modify distinctive features, but of having those distinctive features in the first place!

'Flexibility signifies - since there is no single solution that is preferable to all others - the absolute denial of a fixed, clearcut standpoint. The flexible plan starts out from the certainty that the correct solution does not exist, because the problem requiring solution is in a permanent state of flux, i.e. it is always temporary. Flexibility is ostensibly inherent in relativity, but in actual fact it only has to do with uncertainty; with no daring to commit oneself, and therefore with refusing to accept the responsibility that is inevitably bound up with each and every action that one takes. Although a flexible set-up admittedly adapts itself to each change as it presents itself, it can never be the best and most suitable solution to any one problem; it can at any given moment provide any solution but the most appropriate one. Flexibility therefore represents the set of all unsuitable solutions to a problem.

On these grounds a system which is kept flexible for the sake of the changing objects that are to be accommodated within that system would indeed yield the most neutral solution to specific problems, but never the best, the most appropriate solution...

The only constructive approach to a situation that is subject to change is a form that starts out from this changefulness as a permanent - that is, essentially a static - given factor: a form which is polyvalent. In other words, a form that can be put to different uses without having to undergo changes itself, so that a minimal flexibility can still produce an optimal solution. In our cities of today we are confronted with large numbers of dwellings, the construction of which entails production methods whereby enormous quantities of components can be supplied - which, however, are uniform. By equating the uniformity of dwelling units - the result of those production methods - with the equality of the inhabitants, we have come to the point where uniform dwellings are assembled in monotonous, uniform building blocks.

The uniform urban plan and the uniform floor-plan are based on the segregation of functions, and it is the blind obedience to the dictates of these functions that has resulted in taking the distinctions between living and working, eating and sleeping etc. as the starting-point for conceiving the spaces for different purposes in different ways, on the grounds that different activities make different specific demands on the spaces in which they are to take place. This is what we have been told for the past twenty-five years, but even if living and working or eating and sleeping could justifiably be termed activities, that still does not mean that they make specific demands on the space in which they are to take place - it is the people who make specific demands because they wish to interpret one and the same function in their own specific ways, according to their own specific tastes.

If, in the functional city and the functional floor-plan the identity of those who conceived the idea in the first place is lost without trace, that cannot be blamed on the uniformity of the dwelling units, but on the way in which they are uniform, namely in such a way that they tolerate one particular function exclusively in one prescribed and strictly standardized concept. The houses and cities that are being built nowadays do not and will not permit any fundamental changes at all!

By collectively prescribing where people will have to put their tables and their beds - generation after generation - we are actually causing that uniformity. This collective coagulation of individual freedom of action has assigned a pre-determined purpose to every place in the home and in the city alike - and has done so in such an uninspired way that all the variations that make up identity are radically nipped in the bud. What makes the old canal-houses so livable is that you can work, relax or sleep in every room, that each room kindles the inhabitant's imagination as to how he would most like to use it. The greater diversity in the old city-centre of Amsterdam, for instance, is definitely not caused by richer or more diverse underlying principles (the principles underlying twentieth-century buildings are certainly more complex), but by sequences of spaces in which, although they are not usually very different from one another, the potential for individual interpretation is inherent due to their greater polyvalence.

Collective interpretations of individual living patterns must be abandoned. What we need is a diversity of space in which the different functions can be sublimated to become archetypal forms, which make individual interpretation of the communal living-pattern possible by virtue of their ability to accommodate and absorb, and indeed to induce every desired function and alteration thereof.[1]

What the foregoing, and all the examples that have been cited, boil down to is a plea to design in such a way that buildings and cities possess the ability to adapt themselves to diversity and change while retaining their identity.

What we are looking for is a way of thinking and acting that can lead to a different 'mechanism' (in linguistic terms you would say a paradigm) which is less fixed, less static, and which is therefore better equipped to meet the challenge that twentieth century society in all its complexity puts to the architect. The point therefore is to arrive at an architecture that, when the users decide to put it to different uses than those originally envisaged by the architect, does not get upset and confused and consequently loses its identity. To put it even more strongly: architecture should offer an incentive to its users to influence it wherever possible, not merely to reinforce its identity, but more especially to enhance and affirm the identity of its users.

Structuralism has shown how effective this process is in language, and my persistent reference to this is because it thus indicates a direction for architecture. Even though architecture is still so often conceived as a system of communication, it is not merely a language, although there are a number of analogies, such as the concepts of 'competence' and 'performance', which do not relate to language exclusively but which are just as appropriate to the use of form - and from which we

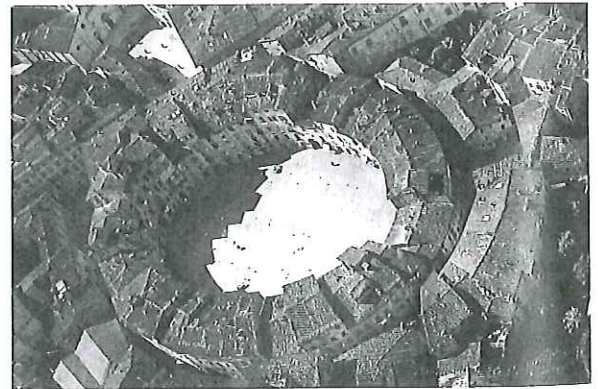
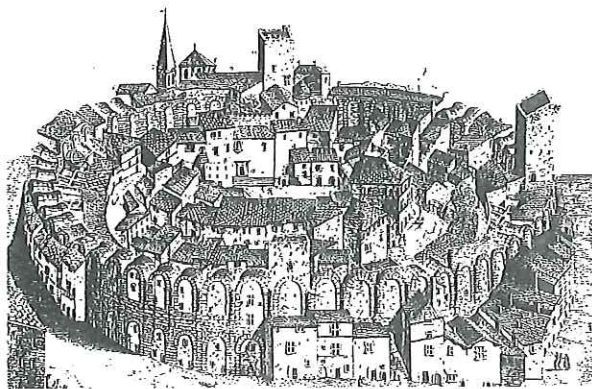
must, in principle, also be able to derive form.

It goes without saying that efficacy must always come first and foremost, since that is the only criterion that is beyond all dispute - although it is of the utmost importance to establish what exactly is meant by the term. Certainly, there are objects and forms that have hardly more than one single purpose - usually technical appliances, and these must indeed simply function, they must just do their job, no more and no less.

But most objects and forms have, besides that single purpose for which they are designed and to which they generally owe their name at the most, an added value and potential and hence great efficacy. This greater efficacy, which we call polyvalence and which comes closest to 'competence', is the characteristic I want to emphasize as a criterion of design.

The following excerpt of a text from 1963 deals with the same basic principles. It also serves as an introduction to the next chapter.

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'The reciprocity of form and programme'

'The most important characteristic of a city is, perhaps, the continuous change inherent in an urban environment, which we experience as a normal, everyday situation. The city is subject to constant change, the city has never complied and still does not comply with the rules of organic growth and functional evolution, according to which man has tried to give it form. Every day, every season, and in the long term, temporary and lasting, incidental and regular changes take place: people move from one house to another and buildings are altered, with the result that shifts occur in the foci of the web of relationships which in turn give rise to other shifts in intensity. Thus each intervention in fact brings about a change in the significance of the other built forms to a greater or lesser extent.

In order that every citizen and everything of the city retain its identity at all times, it is necessary for the situation to be complete in itself at every moment in time.

The process of change must constantly appear to us as a permanent situation, that is why the changeability itself must come first and foremost as a constant factor, which contributes to the significance of each individual form. In order to withstand changes built forms must be made in such a way that they permit multiple interpretations, i.e. that they can both absorb and exude multiple meanings, without, however, losing their identity in the process.

Any uniform dwellings, therefore, must in the same period of time, like any places in the city in different periods of time, be capable of accommodating alternating meanings.

This analogy makes it clear that place and time can be eliminated and substituted by a single, focal point of departure, i.e. that meanings are capable of changing their abode.

It is equally clear that neither neutrality, which is the inevitable result of flexibility (tolerable for all, just right for no-one), nor specificity which is the consequence of too much expression (just right - but for whom?), can yield an adequate solution. It is not somewhere between these two extremes of the lack of commitment and too much self-assurance that the possibility of a solution lies, but quite aside from them: namely in a standpoint that everyone can relate to in his or her own way, a standpoint therefore that can take on a different - and hence divergent - meaning for each individual.

In order to be able to have different meanings each

form must be interpretable in the sense that it must be capable of taking on different roles. And it can only take on those different roles if the different meanings are contained in the essence of the form, so that they are an implicit provocation rather than an explicit suggestion.

A form divested of the meanings that are attached to it, while possessing plurality because each meaning can be derived from it, is reduced to its most primary purpose.

If we want to respond to the multiplicity in which society manifests itself we must liberate form from the shackles of coagulated meanings. We must continuously search for archetypal forms which, because they can be associated with multiple meanings, can not only absorb a programme but can also generate one.

Form and programme evoke one another.' [3]

7 FORM AND USERS: THE SPACE OF FORM

In the foregoing the notion of structure was used as a 'framework' (of constant relationships) with the potential ability to evoke freedom of interpretation - and hence scope - per individual situation.

Up to now we have dealt mainly with urban forms that were interpreted by several people simultaneously, and consequently in collective situations, apparently collective associations were involved.

In terms of the structure and of its designers our main concern was the relation between designer and structure, with the users in effect playing a subservient role, more of object than of subject - for while we can establish that a form has been interpreted as structure, that does not explain what induced people to do so in the first place.

Now by taking form in a general sense to be a sort of structure, the relationship between form and users becomes conceivable, once more, when the users are individuals, and thus the notion of form can throw off the yoke of abstraction. This shift in the attention to what a form can mean to those whom it concerns (and who enter into relationships with it) indirectly raises the question of the relationship between the creator of the form, the designer and the users.

Starting out from interpretability as an inherent characteristic of form, we come to the question of what makes a form - as structure - interpretable.

The answer must be: the accommodating capacity of the form, shall we say its 'competence', which allows it to be filled with associations and thus brings about a mutual dependence with the users.

So what we are concerned with here is the space of the form, in the same way that a musical instrument offers its player freedom of action.

In earlier examples, e.g. the arenas, we also dealt with accommodating capacity in the literal sense, but what we have now termed 'competence' - namely the implication of accommodating capacity for meanings - sheds a different light on all forms in which architecture is involved.

'... so here we are not talking about a notion of form that presupposes and maintains a formal and unalterable relation between object and viewer. We are not here concerned with a visual appearance as a shell around the object, but with form in the sense of accommodating capacity and potential bearer of meaning. Form can be vested with meaning, but can also be divested of it by the use to which the form is put and by the values that are attributed and added to it, or indeed removed from it - all depending on the way in which users and form interact.

What we want to state is that it is this capacity to absorb and communicate meaning that determines the effect form can have on users, and, conversely, the effect of users on form. For the central issue here is the interaction between form and users, what they do to each other, and how they appropriate each other.

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Designing should be a matter of organizing material in such a way that its potential is fully exploited.

Everything that has been deliberately shaped should function better, i.e. it should be better geared to doing what is expected of it, by different people in different situations and at different times. In whatever we set out to make we must try to not only meet the requirements of the function in the strict sense, but also that more than one purpose may be served, so that it can play as many different roles as possible for the benefit of the different individual users. Each user will then be able to react to it in his or her own way, to interpret it personally so that it may be integrated into his familiar surroundings.

Just like words and sentences, forms depend on how they are "read" and which images they are able to conjure up for the "reader". A form can evoke different images in different people and in different situations, and thus take on a different meaning, and it is the phenomenon of this experience that is the key to an altered awareness of form, which will enable us to make things that are better suited to more situations. The ability to absorb meanings and also to abandon them again without essentially changing itself makes form a potential bearer of significance - in short, signifiable ...' [4]

- 1990 Agency for the Nederlandse Bank, Wassenaar
Urban design competition for a suburb of Grenoble (France)
- 1990-1991 MediaPark, projects for housing, kindergarten, office buildings, Cologne (Germany)
- 1991 Office building Benelux Merkenbureau, The Hague
Office Building in the Richti-Areal, Zürich Wallisellen (Switzerland)
City Theatre, Delft
School Collège Anatole France, Drancy (France)
- 1992 Office project Sony – Potzdammerplatz, Berlin (Germany)
- 1992-1993 Berlin Olympia 2000 / urban townplanning
Rummelsburger Bucht, Berlin (Germany)
- 1993 Witieneiland, housing, Amsterdam
Housing, Düren (Germany)
Clemensänger area, urban design, Freising (Germany)
- 1993-1994 Auditorium, Rome (Italy)
- 1994 Governmental office building Céramique site, Maastricht
- 1995 Extension to Fire Department School, Schaarsbergen
Landtag Brandenburg, office building, Potsdam (Germany)
Musicon, concert hall, Bremen (Germany)
- 1995-1996 Luxor Theater, Rotterdam
Urban design railroad surroundings of the Tiburtina en the Ruscolana area and for the Tiburtina-Colombo-axis, Rome (Italy)
- 1996 Lothar Gunther Buchheim Museum, Feldafing (Germany)
Gemeindezentrum, urban design village centre, Dallgow (Germany)
Academy of Arts and Design, Kolding (Denmark)
Urban design residential area, Tel Aviv-Peninsula (Israel)
Ichthus Hogeschool (college of advanced education), Rotterdam
Axel Springer Multi Media, urban design Berlin (Germany)
Theresienhöhe, urban design, Munich (Germany)
- 1997 Theatre, Helsingør (Denmark)
Urban design University Complex, Malmö (Sweden)
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